COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
NORTHERN REGIONAL OFFICE
13901 Crown Court, Woodbridge, Virginia 22193
(703) 583-3800 Fax (703) 583-3821
www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

Thomas A. Faha
Regional Director

May 8, 2014

Ms. Cathy C. Taylor
Director - Electric Environmental Services
Dominion Resources Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Re: Reissuance of Virginia Pollutant Discharge Elimination System (VPDES) Permit No. VA0052451
Dominion – North Anna Power Station, Louisa County

Dear Ms. Taylor:

The Department of Environmental Quality (DEQ) has approved the enclosed effluent limitations and monitoring requirements for the above-referenced permit. Copies of your permit and fact sheet are enclosed.

A Discharge Monitoring Report (DMR) form is no longer included in the reissuance package. DEQ has launched an electronic DMR (e-DMR) program that allows you to submit the effluent monitoring data electronically, and we expect every permittee to use e-DMR as permits are issued or reissued. The first electronic DMR submittal is based on a reissuance date of May 2014:

Monitoring Frequency	Monitoring Start Date	First DMR Due Date
Monthly	June 1, 2014	July 10, 2014
Quarterly	July 1, 2014	January 10, 2015
Semi-Annual	July 1, 2014	January 10, 2015
Annual	January 1, 2015	January 10, 2016

Please reference the effluent limits in your permit and report monitoring results in e-DMR to the same number of significant digits as are included in the permit limits for the parameter. The regional contact for e-DMR is Rebecca Vice; she can be reached at (703) 583-3922 or by e-mail at Rebecca.Vice@deq.virginia.gov. Answers to frequently asked questions about the e-DMR system, including the e-DMR registration process, are available at the following website: http://www.deq.virginia.gov/Programs/Water/PermittingCompliance/ElectronicDMRsubmissions.aspx.

Please note that compliance with the permit's requirements for use and disposal of sewage sludge do not relieve you of your responsibility to comply with federal requirements set forth in 40 CFR Part 503. Until DEQ seeks and is granted authority to administer the Part 503 regulations by EPA, treatment works treating domestic sewage should continue to work directly with EPA to comply with them.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have thirty days from the date of service (the date you actually received this decision or the date it was mailed to you, whichever occurred first) within which to appeal this decision by filing a notice of appeal in accordance with the Rules of the Supreme Court of Virginia with the Director, Department of Environmental Quality. In the event that this decision is served on you by mail, three days are added to that period.

Alternately, any owner under §§ 62.1-44.16, 62.1-44.17, and 62.1-44.19 of the State Water Control Law aggrieved by any action of the State Water Control Board taken without a formal hearing, or by inaction of the Board, may demand in writing a formal hearing of such owner's grievance, provided a petition requesting such hearing is filed with the Board. Said petition must meet the requirements set forth in §1.23(b) of the Board's Procedural Rule No. 1. In cases involving actions of the Board, such petition must be filed within thirty days after notice of such action is mailed to such owner by certified mail.

A Reliability Class II is assigned to this facility and this facility has Class IV licensed operator requirements.

If you have questions about the permit, please contact Susan Mackert at (703) 583-3853, or by Email at susan.mackert@deq.virginia.gov.

Respectfully,

Bryant Thomas
Water Permits & Planning Manager

Enc.: Permit for VA0052451
Fact Sheet for VA0052451

cc: DEQ-Water, OWPP
EPA-Region III, 3WP12
Department of Health, Culpeper/Lexington
Water Compliance, NRO

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Permit No. **VA0052451**
Effective Date: **May 8, 2014**
Expiration Date: **May 7, 2019**

AUTHORIZATION TO DISCHARGE UNDER THE
VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM
AND THE VIRGINIA STATE WATER CONTROL LAW

In compliance with the provisions of the Clean Water Act as amended and pursuant to the State Water Control Law and regulations adopted pursuant thereto, the following owner is authorized to discharge in accordance with the information submitted with the permit application, and with this permit cover page, Part I – Effluent Limitations and Monitoring Requirements, and Part II – Conditions Applicable To All VPDES Permits, as set forth herein.

Owner Name:	Virginia Electric and Power Company
Facility Name:	Dominion – North Anna Power Station
County:	Louisa
Facility Location:	1022 Haley Drive, Mineral, VA 23117

The owner is authorized to discharge to the following receiving stream:

Stream Name:	Lake Anna
River Basin:	York River
River Subbasin:	Not Applicable
Section:	3
Class:	III
Special Standards:	None

Thomas A. Faha
Director, Northern Regional Office
Department of Environmental Quality

May 8, 2014
Date

A. Effluent Limitations and Monitoring Requirements

1. Outfall 001 – Waste Heat Treatment Facility at Dike 3

a. There shall be no discharge of floating solids or visible foam in other than trace amounts.

b. During the period beginning with the permit's effective date and lasting until the expiration date, the permittee is authorized to discharge from Outfall Number 001. Such discharges shall be limited and monitored by the permittee as specified below.

c. Samples and measurements shall be taken at Dike 3 prior to subsurface discharge to Lake Anna.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average[(1)]	Daily Maximum[(1)]	Minimum	Maximum[(1)]	Frequency	Sample Type
Flow[(2)] (MGD)	NL	NA	NA	NL	1/W	Estimate
pH	NA	NA	6.0 S.U.	9.0 S.U.	1/W	Grab
Total Residual Chlorine (TRC)[(3)]	0.011 mg/L	0.011 mg/L	NA	NA	1/M	Grab
Temperature	NL (^oC)	NA	NA	NL (^oC)	1/W	IS
Total Nitrogen[(4)]	NL (mg/L)	NA	NA	NA	1/6M	Calculated
Total Kjeldahl Nitrogen (TKN)	NL (mg/L)	NA	NA	NA	1/6M	Grab
Nitrate+Nitrite (NO_2+NO_3)	NL (mg/L)	NA	NA	NA	1/6M	Grab
Total Phosphorus	NL (mg/L)	NA	NA	NA	1/6M	Grab
Chronic Toxicity – *C. dubia* (TU_c)[(5)]	NA	NA	NA	NL	1/YR	Grab
Chronic Toxicity – *P. promelas* (TU_c)[(5)]	NA	NA	NA	NL	1/YR	Grab

(1) See Part I.B.4.

(2) Average flow is 2335.8 MGD.

(3) See Part I.B.2.

(4) Total Nitrogen is the sum of Total Kjeldahl Nitrogen and NO_2+NO_3 and shall be calculated from the results of those tests.

(5) See Part I.C for whole effluent toxicity requirements.

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.
S.U. = Standard units.
IS = Immersion stabilization.
1/W = Once every week.
1/M = Once every month.
1/6M = Once every 6 months.
1/YR = Once every year.

1/6M = The semi-annual monitoring period shall be January 1 – June 30 and July 1 - December 31. The DMR shall be submitted no later than the 10th day of the month following the monitoring period (July 10 and January 10, respectively).

1/YR = The annual monitoring period shall be January 1 - December 31. The DMR shall be submitted no later than the 10th day of the month following the monitoring period (January 10).

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

A. Effluent Limitations and Monitoring Requirements

2. Outfall 009 – Settling Pond

a. There shall be no discharge of floating solids or visible foam in other than trace amounts.

b. During the period beginning with the permit's effective date and lasting until the expiration date, the permittee is authorized to discharge from Outfall Number 009. Such discharges shall be limited and monitored by the permittee as specified below.

c. Samples shall be taken at the discharge to Lake Anna.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average[(1)]	Daily Maximum[(1)]	Minimum	Maximum[(1)]	Frequency	Sample Type
Flow[(2)] (MGD)	NL	NA	NA	NL	2/M	Estimate
pH	NA	NA	6.0 S.U.	9.0 S.U.	2/M	Grab
Oil and Grease (O&G)	15 mg/L	20 mg/L	NA	NA	1/3M	Grab
Total Suspended Solids (TSS)	30 mg/L	100 mg/L	NA	NA	1/3M	Grab

(1) See Part I.B.4.

(2) Average flow is 0.576 MGD.

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.
S.U. = Standard units.
2/M = Twice every month.
1/3M = Once every three months.

1/3M = The quarterly monitoring periods shall be January 1 – March 31, April 1 – June 30, July 1 – September 30, and October 1 – December 31. The DMR shall be submitted no later than the 10th day of the month following the monitoring period (April 10, July 10, October 10 and January 10, respectively).

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

A. Effluent Limitations and Monitoring Requirements

3. Outfall 013 – Turbine Building Sumps - #1 and #2

a. There shall be no discharge of floating solids or visible foam in other than trace amounts.

b. During the period beginning with the permit's effective date and lasting until the expiration date, the permittee is authorized to discharge from Outfall Number 013. Such discharges shall be limited and monitored by the permittee as specified below.

c. Samples shall be collected during non-storm events.

d. Outfall 013 is substantially identical to Outfall 104. Discharge data from Outfall 104 may be submitted to represent Outfall 013.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average[(1)]	Daily Maximum[(1)]	Minimum	Maximum[(1)]	Frequency	Sample Type
Flow[(2)] (MGD)	NL	NA	NA	NL	1/M	Estimate
pH	NA	NA	6.0 S.U.	9.0 S.U.	1/M	Grab
Oil and Grease (O&G)	15 mg/L	20 mg/L	NA	NA	1/M	Grab
Total Suspended Solids (TSS)	30 mg/L	100 mg/L	NA	NA	1/M	Grab

(1) See Part I.B.4.

(2) Average flow is intermittent.

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.
S.U. = Standard units.
1/M = Once every month.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

A. Effluent Limitations and Monitoring Requirements

4. Outfall 016 – Intake Screen Wash Water

a. There shall be no discharge of floating solids or visible foam in other than trace amounts.

b. During the period beginning with the permit's effective date and lasting until the expiration date, the permittee is authorized to discharge from Outfall Number 016. Such discharges shall be limited and monitored by the permittee as specified below.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average[(1)]	Daily Maximum[(1)]	Minimum	Maximum[(1)]	Frequency	Sample Type
Flow[(2)] (MGD)	NL	NA	NA	NL	1/YR	Estimate

(1) See Part I.B.4.

(2) Average flow is 3.744 MGD.

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.
1/YR = Once every year.

1/YR = The annual monitoring period shall be January 1 - December 31. The DMR shall be submitted no later than the 10th day of the month following the monitoring period (January 10).

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

A. Effluent Limitations and Monitoring Requirements

5. Outfall 020 – Reverse Osmosis Reject

a. There shall be no discharge of floating solids or visible foam in other than trace amounts.

b. During the period beginning with the permit's effective date and lasting until the expiration date or until Unit 3 construction is initiated, whichever comes first, the permittee is authorized to discharge from Outfall Number 020. The initiation of Unit 3 construction will not commence until a certificate of public convenience and necessity is received from the Virginia State Corporation Commission. Such discharges shall be limited and monitored by the permittee as specified below.

c. Samples shall be taken prior to subsurface discharge to Lake Anna.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average[(1)]	Daily Maximum[(1)]	Minimum	Maximum[(1)]	Frequency	Sample Type
Flow[(2)] (MGD)	NL	NA	NA	NL	2/M	Estimate
pH	NA	NA	6.0 S.U.	9.0 S.U.	2/M	Grab
Total Residual Chlorine (TRC)[(3)]	NL	4.0 mg/L	NA	NA	2/M	Grab
Total Suspended Solids (TSS)	30 mg/L	100 mg/L	NA	NA	1/3M	Grab

(1) See Part I.B.4.
(2) Average flow is 0.216 MGD.
(3) See Part I.B.2.

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.
S.U. = Standard units.
2/M = Twice every month.
1/3M = Once every three months.

1/3M = The quarterly monitoring periods shall be January 1 – March 31, April 1 – June 30, July 1 – September 30, and October 1 – December 31. The DMR shall be submitted no later than the 10th day of the month following the monitoring period (April 10, July 10, October 10 and January 10, respectively).

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

A. Effluent Limitations and Monitoring Requirements

6. Outfall 020 – Reverse Osmosis Reject and Reverse Osmosis Backwash

a. There shall be no discharge of floating solids or visible foam in other than trace amounts.

b. During the period beginning with initiation of Unit 3 construction and lasting until the expiration date, the permittee is authorized to discharge from Outfall Number 020. The initiation of Unit 3 construction will not commence until a certificate of public convenience and necessity is received from the Virginia State Corporation Commission. Such discharges shall be limited and monitored by the permittee as specified below.

c. Samples shall be taken prior to subsurface discharge to Lake Anna.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average[1]	Daily Maximum[1]	Minimum	Maximum[1]	Frequency	Sample Type
Flow[2] (MGD)	NL	NA	NA	NL	2/M	Estimate
pH	NA	NA	6.0 S.U.	9.0 S.U.	2/M	Grab
Total Residual Chlorine (TRC)[3]	NL	4.0 mg/L	NA	NA	2/M	Grab
Total Suspended Solids (TSS)	30 mg/L	100 mg/L	NA	NA	1/3M	Grab or 24H-C
Oil and Grease (O&G)	15 mg/L	20 mg/L	NA	NA	1/3M	Grab

[1] See Part I.B.4.

[2] Average flow is 0.716 MGD.

[3] See Part I.B.2.

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.
S.U. = Standard units.

2/M = Twice every month.
1/3M = Once every three months.

1/3M = The quarterly monitoring periods shall be January 1 – March 31, April 1 – June 30, July 1 – September 30, and October 1 – December 31. The DMR shall be submitted no later than the 10th day of the month following the monitoring period (April 10, July 10, October 10 and January 10, respectively).

24H-C = A flow proportional composite sample collected manually or automatically, and discretely or continuously, for the entire discharge of the monitored 24-hour period. Where discrete sampling is employed, the permittee shall collect a minimum of twenty-four (24) aliquots for compositing. Discrete sampling may be flow proportioned either by varying the time interval between each aliquot or the volume of each aliquot. Time composite samples consisting of a minimum twenty-four (24) grab samples obtained at hourly or smaller intervals may be collected where the permittee demonstrates that the discharge flow rate (gallons per minute) does not vary by ≥10% or more during the monitored discharge. An alternative 24-hour composite sampling approach may be approved by DEQ.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

A. Effluent Limitations and Monitoring Requirements

7. Outfall 021 – Reverse Osmosis Drain Line

a. There shall be no discharge of floating solids or visible foam in other than trace amounts.

b. During the period beginning with the permit's effective date and lasting until the expiration date, the permittee is authorized to discharge from Outfall Number 021. Such discharges shall be limited and monitored by the permittee as specified below.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average[1]	Daily Maximum[1]	Minimum	Maximum[1]	Frequency	Sample Type
Flow[2] (MGD)	NL	NA	NA	NL	1/3M	Estimate

[1] See Part I.B.4.

[2] Average flow is intermittent.

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.
1/3M = Once every three months.

1/3M = The quarterly monitoring periods shall be January 1 – March 31, April 1 – June 30, July 1 – September 30, and October 1 – December 31. The DMR shall be submitted no later than the 10th day of the month following the monitoring period (April 10, July 10, October 10 and January 10, respectively).

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

A. Effluent Limitations and Monitoring Requirements

8. Outfall 028 – Beyond Design Basis Pumps / Portable Emergency Water Supply Pumps

a. There shall be no discharge of floating solids or visible foam in other than trace amounts.

b. During the period beginning with the permit's effective date and lasting until the expiration date, the permittee is authorized to discharge from Outfall Number 028. Such discharges shall be limited and monitored by the permittee as specified below.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average[(1)]	Daily Maximum[(1)]	Minimum	Maximum[(1)]	Frequency	Sample Type
Flow[(2)] (MGD)	NL	NA	NA	NL	1/3M	Estimate

(1) See Part I.B.4.

(2) Average flow is 0.014 MGD.

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.
1/3M = Once every three months.

1/3M = The quarterly monitoring periods shall be January 1 – March 31, April 1 – June 30, July 1 – September 30, and October 1 – December 31. The DMR shall be submitted no later than the 10th day of the month following the monitoring period (April 10, July 10, October 10 and January 10, respectively).

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

A. Effluent Limitations and Monitoring Requirements

9. Outfall 101 – Condenser Cooling Water

a. During the period beginning with the permit's effective date and lasting until the expiration date, the permittee is authorized to discharge from Outfall Number 101. Such discharges shall be limited and monitored by the permittee as specified below.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average[(1)]	Daily Maximum[(1)]	Minimum	Maximum[(1)]	Frequency	Sample Type
Flow[(2)] (MGD)	NL	NA	NA	NL	1/D	Calculated and Recorded
Temperature – Inlet Condenser Waterbox	NL (^{O}F)	NL (^{O}F)	NA	NA	1/D	Recorded
Temperature – Outlet Condenser Waterbox	NL (^{O}F)	NL (^{O}F)	NA	NA	1/D	Recorded
Heat Rejection	NA	NA	NA	13.54×10^{9} BTU/hr	1/D	Calculated

(1) See Part I.B.4.

(2) Average flow is 1838.8 MGD.

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.
1/D = Once every day.

Heat Rejection =
1. The value reported as the daily maximum flow for the report period shall be the intake flow rate which occurred on the day that the maximum heat rejected was calculated from Units 1 and/or 2; and
2. Calculations are to be included with the monthly DMR.

A. Effluent Limitations and Monitoring Requirements

10. Outfall 103 – Process Water Clarifier

a. During the period beginning with the permit's effective date and lasting until the expiration date, the permittee is authorized to discharge from Outfall Number 103. Such discharges shall be limited and monitored by the permittee as specified below.

b. pH shall be monitored in the cooling water discharge canal prior to discharge to the Waste Heat Treatment Facility. All other samples shall be taken from the sample tap at the clarifier building prior to the pipe discharge to the tunnel.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average[(1)]	Daily Maximum[(1)]	Minimum	Maximum[(1)]	Frequency	Sample Type
Flow[(2)] (MGD)	NL	NA	NA	NL	1/YR	Estimate
pH	NA	NA	6.0 S.U.	9.0 S.U.	1/YR	Grab
Oil and Grease (O&G)	15 mg/L	20 mg/L	NA	NA	1/YR	Grab
Total Suspended Solids (TSS)	30 mg/L	100 mg/L	NA	NA	1/YR	Grab

[(1)] See Part I.B.4.

[(2)] Average flow is 0.312 MGD.

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.
S.U. = Standard units.
1/YR = Once every year.

1/YR = The annual monitoring period shall be January 1 - December 31. The DMR shall be submitted no later than the 10th day of the month following the monitoring period (January 10).

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

A. Effluent Limitations and Monitoring Requirements

11. Outfall 104 – Turbine Building Sumps – 1, 2, and 3

a. During the period beginning with the permit's effective date and lasting until the expiration date, the permittee is authorized to discharge from Outfall Number 104. Such discharges shall be limited and monitored by the permittee as specified below.
b. Outfall 104 is substantially identical to Outfall 013. Discharge data from Outfall 104 may be submitted to represent Outfall 013.
c. pH shall be monitored in the cooling water discharge canal prior to discharge to the Waste Heat Treatment Facility. All other samples shall be taken prior to mixing with storm water.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average[(1)]	Daily Maximum[(1)]	Minimum	Maximum[(1)]	Frequency	Sample Type
Flow[(2)] (MGD)	NL	NA	NA	NL	1/YR	Estimate
pH	NA	NA	6.0 S.U.	9.0 S.U.	1/YR	Grab
Oil and Grease (O&G)	15 mg/L	20 mg/L	NA	NA	1/YR	Grab
Total Suspended Solids (TSS)	30 mg/L	100 mg/L	NA	NA	1/YR	Grab

(1) See Part I.B.4.
(2) Average flow is 0.288 MGD.

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.
S.U. = Standard units.
1/YR = Once every year.

1/YR = The annual monitoring period shall be January 1 - December 31. The DMR shall be submitted no later than the 10th day of the month following the monitoring period (January 10).

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

A. Effluent Limitations and Monitoring Requirements

12. Outfall 105 – Bearing Cooling Tower Blowdown

a. During the period beginning with the permit's effective date and lasting until the expiration date, the permittee is authorized to discharge from Outfall Number 105. Such discharges shall be limited and monitored by the permittee as specified below.

b. pH shall be monitored in the cooling water discharge canal prior to discharge to the Waste Heat Treatment Facility. All other samples shall be taken at the sample tap before entering the tunnel at the turbine building basement.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average[(1)]	Daily Maximum[(1)]	Minimum	Maximum[(1)]	Frequency	Sample Type
Flow[(2)] (MGD)	NL	NA	NA	NL	1/M	Estimate
pH	NA	NA	6.0 S.U.	9.0 S.U.	1/M	Grab
Free Available Chlorine[(3)]	0.2 mg/L	0.5 mg/L	NA	NA	1/M	Grab
Total Chromium	0.2 mg/L	0.2 mg/L	NA	NA	1/3M	Grab
Total Zinc	1.0 mg/L	1.0 mg/L	NA	NA	1/3M	Grab
126 Priority Pollutants[(4)] (Appendix A of 40 CFR Part 423)	Non-Detectable	Non-Detectable	NA	NA	1/3M	Grab

(1) See Part I.B.4.
(2) Average flow is 0.84 MGD.
(3) See Part I.B.2.
(4) See Part I.G.4.

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.
S.U. = Standard units.
1/M = Once every month.
1/3M = Once every three months.

1/3M = The quarterly monitoring periods shall be January 1 – March 31, April 1 – June 30, July 1 – September 30, and October 1 – December 31. The DMR shall be submitted no later than the 10th day of the month following the monitoring period (April 10, July 10, October 10 and January 10, respectively).

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

A. Effluent Limitations and Monitoring Requirements

13. Outfall 107 – Bearing Cooling Tower Lake-to-Lake Operations

a. During the period beginning with the permit's effective date and lasting until the expiration date, the permittee is authorized to discharge from Outfall Number 107. Such discharges shall be limited and monitored by the permittee as specified below.

b. Samples shall be taken at the sample tap before entering the tunnel at the turbine building basement.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average[(1)]	Daily Maximum[(1)]	Minimum	Maximum[(1)]	Frequency	Sample Type
Flow[(2)] (MGD)	NL	NA	NA	NL	1/YR	Estimate
Total Residual Chlorine (TRC)	NA	4.0 mg/L	NA	NA	1/YR	Grab

(1) See Part I.B.4.

(2) Average flow is intermittent.

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.
1/YR = Once every year.

1/YR = The annual monitoring period shall be January 1 - December 31. The DMR shall be submitted no later than the 10th day of the month following the monitoring period (January 10).

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

A. Effluent Limitations and Monitoring Requirements

14. Outfall 108 – Service Water Overflow

a. During the period beginning with the permit's effective date and lasting until the expiration date, the permittee is authorized to discharge from Outfall Number 108. Such discharges shall be limited and monitored by the permittee as specified below.

b. pH shall be monitored in the cooling water discharge canal prior to discharge to the Waste Heat Treatment Facility. All other samples shall be taken at the sample tap before entering the tunnel at the turbine building basement.

c. Outfall 108 is substantially identical to Outfall 115. Discharge data from Outfall 108 may be submitted to represent Outfall 115.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average[(1)]	Daily Maximum[(1)]	Minimum	Maximum[(1)]	Frequency	Sample Type
Flow[(2)] (MGD)	NL	NA	NA	NL	1/YR	Estimate
pH	NA	NA	6.0 S.U.	9.0 S.U.	1/YR	Grab
Oil and Grease (O&G)	15 mg/L	20 mg/L	NA	NA	1/YR	Grab
Total Suspended Solids (TSS)	30 mg/L	100 mg/L	NA	NA	1/YR	Grab

(1) See Part I.B.4.

(2) Average flow is intermittent.

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.
S.U. = Standard Units.
1/YR = Once every year.

1/YR = The annual monitoring period shall be January 1 - December 31. The DMR shall be submitted no later than the 10th day of the month following the monitoring period (January 10).

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

A. Effluent Limitations and Monitoring Requirements

15. Outfall 109 – Hot Well Drain (Unit 1)

a. During the period beginning with the permit's effective date and lasting until the expiration date, the permittee is authorized to discharge from Outfall Number 109. Such discharges shall be limited and monitored by the permittee as specified below.

b. pH shall be monitored in the cooling water discharge canal prior to discharge to the Waste Heat Treatment Facility. All other samples shall be taken before discharge to the tunnel.

c. Outfall 109 is substantially identical to Outfall 110. Discharge data from Outfall 109 may be submitted to represent Outfall 110.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average[(1)]	Daily Maximum[(1)]	Minimum	Maximum[(1)]	Frequency	Sample Type
Flow[(2)] (MGD)	NL	NA	NA	NL	1/YR	Estimate
pH	NA	NA	6.0 S.U.	9.0 S.U.	1/YR	Grab
Oil and Grease (O&G)	15 mg/L	20 mg/L	NA	NA	1/YR	Grab
Total Suspended Solids (TSS)	30 mg/L	100 mg/L	NA	NA	1/YR	Grab

(1) See Part I.B.4.

(2) Average flow is intermittent.

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.
S.U. = Standard units.
1/YR = Once every year.

1/YR = The annual monitoring period shall be January 1 - December 31. The DMR shall be submitted no later than the 10th day of the month following the monitoring period (January 10).

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

A. Effluent Limitations and Monitoring Requirements

16. Outfall 110 – Hot Well Drain (Unit 2)

a. During the period beginning with the permit's effective date and lasting until the expiration date, the permittee is authorized to discharge from Outfall Number 110. Such discharges shall be limited and monitored by the permittee as specified below.

b. pH shall be monitored in the cooling water discharge canal prior to discharge to the Waste Heat Treatment Facility. All other samples shall be taken before discharge to the tunnel.

c. Outfall 110 is substantially identical to Outfall 109. Discharge data from Outfall 109 may be submitted to represent Outfall 110.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average[(1)]	Daily Maximum[(1)]	Minimum	Maximum[(1)]	Frequency	Sample Type
Flow[(2)] (MGD)	NL	NA	NA	NL	1/YR	Estimate
pH	NA	NA	6.0 S.U.	9.0 S.U.	1/YR	Grab
Oil and Grease (O&G)	15 mg/L	20 mg/L	NA	NA	1/YR	Grab
Total Suspended Solids (TSS)	30 mg/L	100 mg/L	NA	NA	1/YR	Grab

(1) See Part I.B.4.

(2) Average flow is intermittent.

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.
S.U. = Standard units.
1/YR = Once every year.

1/YR = The annual monitoring period shall be January 1 - December 31. The DMR shall be submitted no later than the 10th day of the month following the monitoring period (January 10).

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

A. Effluent Limitations and Monitoring Requirements

17. Outfall 111 – Sewage Treatment Plant (0.030 MGD)

a. During the period beginning with the permit's effective date and lasting until the expiration date, the permittee is authorized to discharge from Outfall Number 111. Such discharges shall be limited and monitored by the permittee as specified below.

b. There shall be no discharge of floating solids or visible foam in other than trace amounts.

c. Samples shall be collected at the effluent V-notch weir prior to subsurface discharge to the cooling water discharge canal.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average[(1)]	Weekly Average[(1)]	Minimum	Maximum[(1)]	Frequency	Sample Type
Flow[(2)] (MGD)	NL	NA	NA	NL	1/D	Estimate
pH	NA	NA	6.0 S.U.	9.0 S.U.	1/M	Grab
Biochemical Oxygen Demand (BOD_5)	30 mg/L 3.4 kg/day	45 mg/L 5.1 kg/day	NA	NA	1/M	Grab
Total Suspended Solids (TSS)	30 mg/L 3.4 kg/day	45 mg/L 5.1 kg/day	NA	NA	1/M	Grab
Total Residual Chlorine (after contact tank)[(3),(4)]	NA	NA	1.0 mg/L	NA	1/D	Grab
Influent Biochemical Oxygen Demand (BOD_5)[(5)]	NL (mg/L)	NL (mg/L)	NA	NA	1/YR	Grab
Influent Total Suspended Solids (TSS)[(5)]	NL (mg/L)	NL (mg/L)	NA	NA	1/YR	Grab

(1) See Part I.B.4.

(2) The design flow is 0.030 MGD.

(3) See Part I.B.1.

(4) TRC monitoring is only required if chlorination is used in the wastewater treatment process.

(5) The VPDES Permit Regulation at 9VAC25-31-30 and 40 CFR Part 133 require that the facility achieve at least 85% removal for BOD and TSS. This permit requires influent BOD and TSS monitoring on an annual basis to demonstrate 85% removal.

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.
S.U. = Standard units.

1/D = Once every day.
1/M = Once every month.
1/YR = Once every year.

1/YR = The annual monitoring period shall be January 1 - December 31. The DMR shall be submitted no later than the 10th day of the month following the monitoring period (January 10).

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

A. Effluent Limitations and Monitoring Requirements

18. Outfall 112 – Steam Generator Blowdown (Unit 1)

a. During the period beginning with the permit's effective date and lasting until the expiration date, the permittee is authorized to discharge from Outfall Number 112. Such discharges shall be limited and monitored by the permittee as specified below.

b. pH shall be monitored in the cooling water discharge canal prior to discharge to the Waste Heat Treatment Facility. All other samples shall be taken at the sample tap before entering the tunnel at the turbine building basement (Unit 1 side).

c. Outfall 112 is substantially identical to Outfall 113. Discharge data from Outfall 112 may be submitted to represent Outfall 113.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average[(1)]	Daily Maximum[(1)]	Minimum	Maximum[(1)]	Frequency	Sample Type
Flow[(2)] (MGD)	NL	NA	NA	NL	1/YR	Estimate
pH	NA	NA	6.0 S.U.	9.0 S.U.	1/YR	Grab
Oil and Grease (O&G)	15 mg/L	20 mg/L	NA	NA	1/YR	Grab
Total Suspended Solids (TSS)	30 mg/L	100 mg/L	NA	NA	1/YR	Grab

(1) See Part I.B.4.

(2) Average flow is 0.204 MGD.

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.
S.U. = Standard units.
1/YR = Once every year.

1/YR = The annual monitoring period shall be January 1 - December 31. The DMR shall be submitted no later than the 10th day of the month following the monitoring period (January 10).

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

A. Effluent Limitations and Monitoring Requirements

19. Outfall 113 – Steam Generator Blowdown (Unit 2)

a. During the period beginning with the permit's effective date and lasting until the expiration date, the permittee is authorized to discharge from Outfall Number 113. Such discharges shall be limited and monitored by the permittee as specified below.

b. pH shall be monitored in the cooling water discharge canal prior to discharge to the Waste Heat Treatment Facility. All other samples shall be taken at the sample tap before entering the tunnel at the turbine building basement (Unit 2 side).

c. Outfall 113 is substantially identical to Outfall 112. Discharge data from Outfall 112 may be submitted to represent Outfall 113.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average[(1)]	Daily Maximum[(1)]	Minimum	Maximum[(1)]	Frequency	Sample Type
Flow[(2)] (MGD)	NL	NA	NA	NL	1/YR	Estimate
pH	NA	NA	6.0 S.U.	9.0 S.U.	1/YR	Grab
Oil and Grease (O&G)	15 mg/L	20 mg/L	NA	NA	1/YR	Grab
Total Suspended Solids (TSS)	30 mg/L	100 mg/L	NA	NA	1/YR	Grab

(1) See Part I.B.4.

(2) Average flow is 0.204 MGD.

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.
S.U. = Standard units.
1/YR = Once every year.

1/YR = The annual monitoring period shall be January 1 - December 31. The DMR shall be submitted no later than the 10th day of the month following the monitoring period (January 10).

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

A. Effluent Limitations and Monitoring Requirements

20. Outfall 114 – Service Water Tie-On Vault Drain

a. During the period beginning with the permit's effective date and lasting until the expiration date, the permittee is authorized to discharge from Outfall Number 114. Such discharges shall be limited and monitored by the permittee as specified below.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average[1]	Daily Maximum[1]	Minimum	Maximum[1]	Frequency	Sample Type
Flow[2] (MGD)	NL	NA	NA	NL	1/YR	Estimate
pH	NA	NA	6.0 S.U.	9.0 S.U.	1/YR	Grab
Oil and Grease (O&G)	15 mg/L	20 mg/L	NA	NA	1/YR	Grab
Total Suspended Solids (TSS)	30 mg/L	100 mg/L	NA	NA	1/YR	Grab

[1] See Part I.B.4.

[2] Average flow is intermittent.

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.
S.U. = Standard units.
1/YR = Once every year.

1/YR = The annual monitoring period shall be January 1 - December 31. The DMR shall be submitted no later than the 10th day of the month following the monitoring period (January 10).

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

A. Effluent Limitations and Monitoring Requirements

21. Outfall 115 – Service Water High Capacity Blowdown

a. During the period beginning with the permit's effective date and lasting until the expiration date, the permittee is authorized to discharge from Outfall Number 115. Such discharges shall be limited and monitored by the permittee as specified below.

b. Outfall 115 is substantially identical to Outfall 108. Discharge data from Outfall 108 may be submitted to represent Outfall 115.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average[(1)]	Daily Maximum[(1)]	Minimum	Maximum[(1)]	Frequency	Sample Type
Flow[(2)] (MGD)	NL	NA	NA	NL	1/YR	Estimate
pH	NA	NA	6.0 S.U.	9.0 S.U.	1/YR	Grab
Oil and Grease (O&G)	15 mg/L	20 mg/L	NA	NA	1/YR	Grab
Total Suspended Solids (TSS)	30 mg/L	100 mg/L	NA	NA	1/YR	Grab

(1) See Part I.B.4.

(2) Average flow is intermittent.

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.
S.U. = Standard units.
1/YR = Once every year.

1/YR = The annual monitoring period shall be January 1 - December 31. The DMR shall be submitted no later than the 10th day of the month following the monitoring period (January 10).

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

A. Effluent Limitations and Monitoring Requirements

22. Outfall 116 – Vacuum Priming Pump

a. During the period beginning with the permit's effective date and lasting until the expiration date, the permittee is authorized to discharge from Outfall Number 116. Such discharges shall be limited and monitored by the permittee as specified below.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average[(1)]	Daily Maximum[(1)]	Minimum	Maximum[(1)]	Frequency	Sample Type
Flow[(2)] (MGD)	NL	NA	NA	NL	1/6M	Estimate

(1) See Part I.B.4.

(2) Average flow is 0.0576 MGD.

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.
1/6M = Once every six months.

1/6M = The semi-annual monitoring periods shall be January 1 – June 30 and July 1 – December 31. The DMR shall be submitted no later than the 10th day of the month following the monitoring period (July 10 and January 10, respectively).

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

A. Effluent Limitations and Monitoring Requirements

23. Outfall 117 – Salt Storage Pond

a. During the period beginning with the permit's effective date and lasting until the expiration date, the permittee is authorized to discharge from Outfall Number 117. Such discharges shall be limited and monitored by the permittee as specified below.

b. Discharge from the Salt Storage Pond to Lake Anna is prohibited.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average[(1)]	Daily Maximum[(1)]	Minimum	Maximum[(1)]	Frequency	Sample Type
Flow[(2)] (MGD)	NL	NA	NA	NL	Contingent	Estimate

(1) See Part I.B.4.

(2) Average flow is intermittent.

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.

Contingent = Monitoring of this outfall is only required if a discharge occurs. The reporting frequency shall be on an annual basis (1/YR). The annual monitoring period shall be January 1 through December 31. The DMR shall be submitted no later than the 10th day of the month following the monitoring period.

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

Salt Storage Pond Requirements:

In the case of a storm event(s) that could result in an overflow of the salt storage pond, the permittee is authorized to pump water from the salt storage pond to the discharge canal via Outfall 117. Any discharge from the salt storage pond to Lake Anna is prohibited.

A. Effluent Limitations and Monitoring Requirements

24. Outfall 118 – Beyond Design Basis Pumps / Portable Emergency Water Supply Pumps

a. During the period beginning with the permit's effective date and lasting until the expiration date, the permittee is authorized to discharge from Outfall Number 118. Such discharges shall be limited and monitored by the permittee as specified below.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average[(1)]	Daily Maximum[(1)]	Minimum	Maximum[(1)]	Frequency	Sample Type
Flow[(2)] (MGD)	NL	NA	NA	NL	1/3M	Estimate

(1) See Part I.B.4.

(2) Average flow is 0.014 MGD.

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.
1/3M = Once every three months.

1/3M = The quarterly monitoring periods shall be January 1 – March 31, April 1 – June 30, July 1 – September 30, and October 1 – December 31. The DMR shall be submitted no later than the 10th day of the month following the monitoring period (April 10, July 10, October 10 and January 10, respectively).

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

A. Effluent Limitations and Monitoring Requirements

25. Outfalls 014, 022, 024, 025, and 027 - Storm Water

a. During the period beginning with the permit's effective date and lasting until the expiration date, the permittee is authorized to discharge storm water from Outfalls 014, 022, 024, 025, and 027. Such discharges shall be monitored and managed in accordance with Part 1.F.

There shall be no discharge of industrial process water from Outfall 014, 022, 024, 025, and 027.

B. Additional Monitoring Requirements, Quantification Levels and Compliance Reporting

1. Additional Total Residual Chlorine (TRC) Limitations and Monitoring Requirements (Outfall 111 Only)

   a. The permitee shall monitor TRC at the outlet of the chlorine contact tank once per day by grab sample.

   b. No more than three (3) of the total number of monthly samples taken at the outlet of the chlorine contact tank shall be less than 1.0 mg/L for any one calendar month.

   c. No TRC sample collected at the outlet of the chlorine contact tank shall be less than 0.6 mg/L.

   d. If chlorine disinfection is not used, *E. coli* shall be limited and monitored by the permittee as specified below:

	Discharge Limitations Monthly Average	Monitoring Frequency Requirements	Sample Type
E. coli	126 n/100ml Geometric Mean	1/W	Grab Between 10 AM & 4 PM

   This *E. coli* requirement, if applicable, shall substitute for the TRC requirements delineated elsewhere in Part I.

2. Additional Total Residual Chlorine (TRC) Limitations and Monitoring Requirements (Outfall 105 Only)

   a. Neither free available chloring nor total residual chlorine may be discharged from any single generating unit for more than two hours per day, unless the permittee demonstrates to the Department of Environmental Quality (DEQ) that discharge for more than two hours is required for macroinvertebrate control. If the permittee is dechlorinating, the two hour requirement is nullified.

   b. Simultaneous multi-unit chlorination is permitted.

3. Quantification Levels

   a. The quantification levels (QL) below are applicable to the compliance monitoring required in Part I.A of the permit. The QL shall be less than or equal to the following concentrations:

Characteristic	Quantification Level
Chromium	25 µg/L
TRC	0.10 mg/L
TSS	1.0 mg/L
Zinc (Outfall 001 Only)	26 µg/L
Zinc (Outfall 105 Only)	1.0 mg/L

   b. The QL is defined as the lowest concentration used to calibrate a measurement system in accordance with the procedures published for the method. The permittee shall use any method in accordance with Part II. A of this permit.

   c. It is the responsibility of the permittee to ensure that proper quality assurance/quality control (QA/QC) protocols are followed during the sampling and analytical procedures. QA/QC information shall be documented to confirm that appropriate analytical procedures have been used and the required QLs have been attained.

4. Compliance Reporting for parameters in Part I.A.

a. Monthly Average – Compliance with the monthly average limitations and/or reporting requirements for the parameters listed in Part I.B.3.a of this permit condition shall be determined as follows: All concentration data below the QL used for the analysis (QL must be less than or equal to the QL listed in Part I.B.3.a above) shall be treated as zero. All concentration data equal to or above the QL used for the analysis (QL must be less than or equal to the QL listed in Part I.B.3.a above) shall be treated as it is reported. An arithmetic average shall be calculated using all reported data for the month, including the defined zeros. This arithmetic average shall be reported on the Discharge Monitoring Report (DMR) as calculated. If all data are below the QL used for the analysis (QL must be less than or equal to the QL listed in Part I.B.3.a above), then the average shall be reported as "<QL". If reporting for quantity is required on the DMR and the reported monthly average concentration is <QL, then report "<QL" for the quantity. Otherwise use the reported concentration data (including the defined zeros) and flow data for each sample day to determine the daily quantity and report the monthly average of the calculated daily quantities.

b. Daily Maximum - Compliance with the daily maximum limitations and/or reporting requirements for the parameters listed in Part I.B.3.a of this permit condition shall be determined as follows: All concentration data below the QL used for the analysis (QL must be less than or equal to the QL listed in Part I.B.3.a above) shall be treated as zero. All concentration data equal to or above the QL used for the analysis (QL must be less than or equal to the QL listed in Part I.B.3.a above) shall be treated as reported. An arithmetic average shall be calculated using all reported data, including the defined zeros, collected within each day during the reporting month. The maximum value of these daily averages thus determined shall be reported on the DMR as the Daily Maximum. If all data are below the QL used for the analysis (QL must be less than or equal to the QL listed in Part I.B.3.a above), then the maximum value of the daily averages shall be reported as "<QL". If reporting for quantity is required on the DMR and the reported daily maximum is <QL, then report "<QL" for the quantity. Otherwise use the reported daily average concentrations (including the defined zeros) and corresponding daily flows to determine daily average quantities and report the maximum of the daily average quantities during the reporting month.

c. Maximum Weekly Average (Outfall 111 Only) - Compliance with the weekly average limitations and/or reporting requirements for the parameters listed in Part I.B.3.a of this permit condition shall be determined as follows: All concentration data below the QL used for the analysis (QL must be less than or equal to the QL listed in Part I.B.3.a above) shall be treated as zero. All concentration data equal to or above the QL used for the analysis (QL must be less than or equal to the QL listed in Part I.B.3.a above) shall be treated as reported. An arithmetic average shall be calculated using all reported data, including the defined zeros, collected within each complete calendar week and entirely contained within the reporting month. The maximum value of the weekly averages thus determined shall be reported on the DMR. If all data are below the QL used for the analysis (QL must be less than or equal to the QL listed in Part I.B.3.a above), then the weekly average shall be reported as "<QL". If reporting for quantity is required on the DMR and the reported weekly average concentration is <QL, then report "<QL" for the quantity. Otherwise use the reported concentration data (including the defined zeros) and flow data for each sample day to determine the daily quantity and report the maximum weekly average of the calculated daily quantities.

d. Single Datum - Any single datum required shall be reported as "<QL" if it is less than the QL used in the analysis (QL must be less than or equal to the QL listed in Part I.B.3.a above). Otherwise the numerical value shall be reported.

e. Significant Digits - The permittee shall report at least the same number of significant digits as the permit limit for a given parameter. Regardless of the rounding convention used (i.e., 5 always rounding up or to the nearest even number) by the permittee, the permittee shall use the convention consistently, and shall ensure that consulting laboratories employed by the permittee use the same convention.

f. Heat Rejection - Heat rejected rate submitted monthly shall be a calculation of the maximum heat directed to the waste heat treatment facility from Units 1 and/or 2. The following calculation shall be used to determine heat rejection:

$$Q = \frac{C_p m(\Delta T)}{24 \text{ hr}}$$

Where Q = Heat Rejection, BTU/Hour
C_p = Heat Capacity (Specific Heat) of pure water
= 1.0 BTU/pound ^oF
m = Mass of Water
= flow rate (MGD) x specific gravity of pure water
= flow rate (MGD) x 8.34 pounds/gallon
ΔT = Temperature at outlet waterbox – temperature of intake waterbox, ^oF

C. Whole Effluent Toxicity Program Requirements

1. Biological Monitoring for Outfall 001

a. In accordance with the schedule in Part I.C.2. below, the permittee shall conduct annual chronic toxicity tests for the duration of the permit. The permittee shall collect grab samples of effluent from Outfall 001.

The chronic tests to use are:

Chronic 3-Brood Static Renewal Survival and Reproduction Test using *Ceriodaphnia dubia*

Chronic 7-Day Static Renewal Survival and Growth Test using *Pimephales promelas*

These chronic tests shall be conducted in such a manner and at sufficient dilutions (minimum of five dilutions) to determine the "No Observed Effect Concentration" (NOEC) for survival and reproduction or growth. Results which cannot be quantified (i.e., a "less than" NOEC value) are not acceptable and a retest shall be performed. The NOEC as determined by hypothesis testing shall be converted to TU_c (Chronic Toxic Units) for DMR reporting where $TU_c = 100/NOEC$. Report the LC_{50} at 48 hours and the IC_{25} with the NOEC's in the test report.

b. The permittee may provide additional samples to address data variability. These data shall be reported. Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3.

c. The test dilutions shall bracket and include the following endpoint:

Chronic NOEC $\geq$ 100%; equivalent to a $TU_c \leq 1.0$

d. The test data will be evaluated statistically for reasonable potential at the conclusion of the test period. The data may be evaluated sooner if requested by the permittee or if toxicity has been noted. Should evaluation of the data indicate that a limit is warranted, a WET limit and compliance schedule will be required.

e. The permit may be modified or revoked and reissued to include pollutant specific limits in lieu of a WET limit should it be demonstrated that toxicity is due to specific parameters. The pollutant specific limitation shall control the toxicity of the effluent.

f. Should the permittee conduct toxicity testing of the effluent prior to the compliance date listed in the schedule in Part I.C.2. below, the results of the test and the test report shall be reported with the DMR for the month following the receipt of the testing results. In no case shall this exceed 45 days from the completion of the test or the report submission date below, whichever may occur first.

2. Reporting Schedule

The permittee shall monitor during the specified period; shall report the results on the DMR; and shall supply one copy of the toxicity test report specified in this Whole Effluent Toxicity Program in accordance with the following schedule:

Period	Sampling Period	DMR/Report Submission Dates
Annual 1	January 1, 2015 – December 31, 2015	January 10, 2016
Annual 2	January 1, 2016 – December 31, 2016	January 10, 2017
Annual 3	January 1, 2017 – December 31, 2017	January 10, 2018
Annual 4	January 1, 2018 – December 31, 2018	January 10, 2019

D. Lake Level Management and Lake Anna Dam Flow Release Conditions

1. This VPDES permit shall govern releases from the Lake Anna Dam until such time as the permittee has notified DEQ of its intent to implement a permanent increase of three inches in the normal target pool elevation of Lake Anna to support a new unit (Unit 3) and implements the increase. Upon implementation of the permanent increase of three inches in the normal target pool elevation of Lake Anna, VWP permit number 10-2001 shall supersede this section and govern flow releases from the Lake Anna Dam.

2. Except as provided in Part I.D.4 below, the permittee shall at all times provide a minimum release from the Lake Anna dam of 40 cfs.

3. Skimmer gate operations and adjustments shall be performed in accordance with Station Operating Procedures (SOP). The SOP shall reflect the use of both engineering calculations and the flow gaging station on the North Anna River downstream of the Lake Anna dam (USGS 01670400), with the target of achieving the flow releases identified in this section. The permittee shall update the SOP and submit for approval a summary description of the SOP procedures for skimmer gate adjustments to target flow releases of 40 cfs and below to the DEQ – Northern Regional Office by August 8, 2014. Once approved, the summary description of the SOP procedures shall be an enforceable part of the permit. Any changes to the SOP procedures for skimmer gate adjustments that relate to flow releases shall be submitted for approval to the DEQ - Northern Regional Office through an updated summary description of the SOP procedures prior to implementing the proposed changes.

4. When the level in Lake Anna reaches 248 feet above mean sea level (msl), the permittee shall begin reducing releases below the 40 cfs minimum in accordance with the following conditions:

   a. Minimum release rates shall not drop below 20 cfs.

   b. Prior to reducing Lake Anna Dam releases from 40 cfs to 20 cfs, the permittee shall provide a minimum of 72 hours advance notice to the Department of Environmental Quality – Northern Regional Office, and the downstream users and lake stakeholders identified below:

      - Hanover County Public Utilities
      - Bear Island Paper Company
      - Engel Farms, Incorporated
      - Pamunkey Indian Tribal Government
      - Virginia Department of Game and Inland Fisheries
      - Lake Anna Civic Association

   c. Skimmer gate adjustments shall be performed in accordance with Station Operating Procedures as described in Part I.D.3 above.

   d. When transitioning between dam releases of 40 cfs and 20 cfs, the releases shall be stepped down in increments of approximately 5 cfs with at least a 72-hour period following each incremental change, and prior to any subsequent reduction.

   e. During the period in which releases are reduced below 40 cfs, conditions in the North Anna River shall be monitored in accordance with the North Anna River Monitoring Plan – Low Flow Conditions previously submitted by the permittee and approved by DEQ.

      The permittee shall update and submit for approval the North Anna River Monitoring Plan – Low Flow Conditions to the DEQ - Northern Regional Office by November 8, 2014. Once approved, the plan shall be an enforceable part of the permit. Any future changes to the plan must be submitted for approval to the DEQ - Northern Regional Office 60 days prior to implementing the proposed changes.

   f. Upon the lake level returning to greater than 248 feet msl, releases from the dam shall return to 40 cfs. Releases shall be stepped up in approximate 5 cfs increments with a 24-hour period between each increase, unless lake level is increasing rapidly due to significant inflow to the lake.

   g. If any downstream user identifies an adverse effect at any time during flow reductions and notifies the DEQ – Northern Regional Office of the adverse effect, DEQ shall make a timely investigation. If after notice to the permitee and affected downstream users, DEQ finds an adverse effect from the flow reduction the permittee shall increase releases from the Lake Anna Dam when directed by DEQ. Releases shall be stepped up in approximate 5 cfs increments with a 24-hour period between each increase, until the flow reaches 40 cfs or DEQ finds that the adverse effect has been eliminated.

   h. Adverse effect is defined as the inability to withdraw and/or discharge water for proper operation of facilities, or impairment of water quality.

5. The existing gaging station on the North Anna River downstream of the Lake Anna dam (USGS 01670400) shall remain operational such that flow data are acceptable to be published by the U.S. Geological Survey (USGS). This may be achieved through a cooperative agreement with the USGS for the costs of operation and maintenance of the existing gaging station.

6. The permittee shall install and operate technology to measure and record the water elevation at the Lake Anna dam by May 8, 2015. The lake level recording technology shall, at a minimum, have a measurement accuracy of 0.05 feet and minimize the effects of wave action on water elevation measurements. Lake level measurements shall be recorded at least daily. The procedures for operation and maintenance of the lake level monitoring and recording instrumentation shall be incorporated into the facility's Operation and Maintenance Manual. Installation and operation shall not contravene those requirements established within Part I.G.2.a of VWP Permit 10-2001.

E. Post 316(a) Monitoring

1. In accordance with the original 316(a) study submittal and the biological and temperature sampling conducted since then, and to support 316(a) variance approval, the permittee shall continue to conduct temperature and biological monitoring of Lake Anna, the Waste Heat Treatment Facility, and the North Anna River.

2. The permittee shall review the existing Post 316(a) Monitoring Plan and notify the DEQ - Northern Regional Office, in writing, whether it is still accurate and complete by November 8, 2014. If the Post 316(a) Monitoring Plan is no longer accurate and complete, a revised Post 316(a) Monitoring Plan shall be submitted for approval to the DEQ - Northern Regional Office by November 8, 2014. The approved plan is an enforceable part of the permit. Any future changes to the plan must be submitted for approval to the DEQ - Northern Regional Office at least 60 days prior to implementation.

3. Temperature monitoring shall occur at a minimum of eleven (11) stations; three in the WHTF, seven in Lake Anna, and one in the North Anna River. Fixed continuous temperature recorders shall be used at each location to record hourly temperature in degrees Celsius at a depth of one meter for all of the stations except at the station in Lake Anna closest to Dike 3 which shall be placed at a depth of three meters. Temperature recorders shall be field verified and calibrated annually.

4. Biological monitoring shall include fish population surveys.

5. The permittee shall submit the results for the preceding year's monitoring by May 31 of each year. The permittee shall submit with the annual report an analysis of the data and recommendations for changes to the study design as appropriate.

F. Storm Water Management

1. General Storm Water Special Conditions

   a. Quarterly Visual Examination of Storm Water Quality

      1. The permittee shall perform and document a quarterly visual examination of a storm water discharge associated with industrial activity from the three industrially influenced outfalls listed in Part I.A.20, except discharges exempted below. The examination(s) shall be made at least once in each of the following three-month periods: January through March, April through June, July through September, and October through December. The visual examination shall be made during normal working hours, where practicable, when considerations for safety and feasibility allow. If no storm event resulted in runoff from the facility during a monitoring quarter, the permittee is excused from visual monitoring for that quarter provided that documentation is included with the monitoring records indicating that no runoff occurred. The documentation shall be signed and certified in accordance with Part II.K (Signatory Requirements) of this permit.

2. Visual examinations shall be made of samples collected within the first 30 minutes (or as soon thereafter as practical, but not to exceed three hours) of when the runoff or snowmelt begins discharging from the facility. The examination shall document observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen and other obvious indicators of storm water pollution. The examination shall be conducted in a well-lit area. No analytical tests are required to be performed on the samples. All samples (except snowmelt samples) shall be collected from the discharge resulting from a storm event that results in an actual discharge from the site (defined as a "measurable storm event"), and that occurs at least 72 hours from the previously measurable storm event. The 72-hour storm interval is waived if the permittee is able to document that less than a 72-hour interval is representative for local storm events during the sampling period. Where practicable, the same individual should carry out the collection and examination of discharges for the entire permit term. If no qualifying storm event resulted in runoff during normal working hours from the facility during a monitoring quarter, the permittee is excused from visual monitoring for that quarter provided that documentation is included with the monitoring records indicating that no qualifying storm event occurred during normal working hours that resulted in storm water runoff during that quarter. The documentation shall be signed and certified in accordance with Part II.K (Signatory Requirements) of this permit.

3. The visual examination reports shall be maintained on-site with the Storm Water Pollution Prevention Plan (SWPPP). The report shall include the outfall location, the examination date and time, examination personnel, the nature of the discharge (i.e., runoff or snow melt), visual quality of the storm water discharge (including observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution), and probable sources of any observed storm water contamination.

4. If the facility has two or more outfalls that discharge substantially identical effluents, based on similarities of the industrial activities, significant materials, size of drainage areas, and storm water management practices occurring within the drainage areas of the outfalls, the permittee may conduct visual monitoring on the effluent of just one of the outfalls and report that the observations also apply to the substantially identical outfall(s), provided that the permittee includes in the storm water pollution prevention plan a description of the location of the outfalls and explains in detail why the outfalls are expected to discharge substantially identical effluents. In addition, for each outfall that the permittee believes is representative, an estimate of the size of the drainage area (in square feet) and an estimate of the runoff coefficient of the drainage area (i.e., low (under 40 percent), medium (40 to 65 percent), or high (above 65 percent)) shall be provided in the plan.

5. When the permittee is unable to conduct the visual examination due to adverse climatic conditions, the permittee shall document the reason for not performing the visual examination and retain this documentation onsite with the records of the visual examinations. Adverse weather conditions that may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).

b. Allowable Non-Storm Water Discharges

1. The following non-storm water discharges are authorized by this permit provided the non-storm water component of the discharge is in compliance with this VPDES permit:

   a) Discharges from fire fighting activities;
   b) Fire hydrant flushings;
   c) Potable water including water line flushings;
   d) Uncontaminated air conditioning or compressor condensate;
   e) Irrigation drainage;

f) Landscape watering provided all pesticides, herbicides and fertilizers have been applied in accordance with manufacturer's instructions;
g) Pavement wash waters where no detergents are used and no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed);
h) Routine external building wash down which does not use detergents;
i) Uncontaminated ground water or spring water;
j) Foundation or footing drains where flows are not contaminated with process materials; and
k) Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but NOT intentional discharges from the cooling tower (e.g., "piped" cooling tower blowdown or drains).

2. Except for flows from fire fighting activities, the Storm Water Pollution Prevention Plan shall include:

a) Identification of each allowable non-storm water source;
b) The location where the non-storm water is likely to be discharged; and
c) Descriptions of appropriate BMPs for each source.

3. If mist blown from cooling towers is included as one of the allowable non-storm water discharges from the facility, the permittee shall specifically evaluate the discharge for the presence of chemicals used in the cooling tower. The evaluation shall be included in the SWPPP.

c. Releases of Hazardous Substances or Oil in Excess of Reportable Quantities

The discharge of hazardous substances or oil in the storm water discharge(s) from the facility shall be prevented or minimized in accordance with the storm water pollution prevention plan for the facility. This permit does not authorize the discharge of hazardous substances or oil resulting from an on-site spill. This permit does not relieve the permittee of the reporting requirements of 40 CFR 110, 40 CFR 117 and 40 CFR 302 or § 62.1-44.34:19 of the Code of Virginia. Where a release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR 110, 40 CFR 117 or 40 CFR 302 occurs during a 24-hour period:

1. The permittee is required to notify the Department in accordance with the requirements of Part II.G (Reports of Unauthorized Discharges) of this permit as soon as he or she has knowledge of the discharge;

2. Where a release enters a municipal separate storm sewer system (MS4), the permittee shall also notify the owner of the MS4; and

3. The storm water pollution prevention plan required by this permit shall be reviewed to identify measures to prevent the reoccurrence of such releases and to respond to such releases, and the plan shall be modified where appropriate.

2. Storm Water Pollution Prevention Plan

A storm water pollution prevention plan (SWPPP) for the facility was required to be developed and implemented under the previous permit. The existing storm water pollution prevention plan shall be reviewed and modified, as appropriate, to conform to the requirements of this section. Permittees shall implement the provisions of the storm water pollution prevention plan as a condition of this permit.

The storm water pollution prevention plan requirements of this permit may be fulfilled, in part, by incorporating by reference other plans or documents such as a spill prevention control and countermeasure (SPCC) plan developed for the facility under Section 311 of the Clean Water Act, or best management

practices (BMP) programs otherwise required for the facility, provided that the incorporated plan meets or exceeds the plan requirements of Part I.F.2.b (Contents of the Plan). All plans incorporated by reference into the storm water pollution prevention plan become enforceable under this permit. If a plan incorporated by reference does not contain all of the required elements of the SWPPP of Part I.F.2.b the permittee shall develop the missing SWPPP elements and include them in the required plan.

a. Deadlines for Plan Preparation and Compliance

1. Measures That Require Construction. In cases where construction is necessary to implement measures required by the plan, the plan shall contain a schedule that provides compliance with the plan as expeditiously as practicable, but no later than 3 years after the effective date of this permit. Where a construction compliance schedule is included in the plan, the schedule shall include appropriate nonstructural and/or temporary controls to be implemented in the affected portion(s) of the facility prior to completion of the permanent control measure.

b. Contents of the Plan

The contents of the SWPPP shall comply with the requirements listed below. The plan shall include, at a minimum, the following items:

1. Pollution Prevention Team. The plan shall identify the staff individuals by name or title that comprise the facility's storm water pollution prevention team. The pollution prevention team is responsible for assisting the facility or plant manager in developing, implementing, maintaining, revising, and ensuring compliance with the facility's SWPPP. Specific responsibilities of each staff individual on the team shall be identified and listed.

2. Site Description. The plan shall include the following:

a) Activities at the Facility. A description of the nature of the industrial activities at the facility.

b) General Location Map. A general location map (e.g., USGS quadrangle or other map) with enough detail to identify the location of the facility and the receiving waters within one mile of the facility.

c) Site Map. A site map identifying the following:

(i) The size of the property (in acres);

(ii) The location and extent of significant structures and impervious surfaces (roofs, paved areas and other impervious areas);

(iii) Locations of all storm water conveyances including ditches, pipes, swales, and inlets, and the directions of storm water flow (use arrows to show which ways storm water will flow);

(iv) Locations of all existing structural and source control BMPs;

(v) Locations of all surface water bodies, including wetlands;

(vi) Locations of potential pollutant sources identified under Part I.F.2.b.3;

(vii) Locations where significant spills or leaks identified under Part I.F.2 b.4 have occurred;

(viii) Locations of the following activities where such activities are exposed to precipitation: fueling stations; vehicle and equipment maintenance and/or cleaning areas; loading/unloading areas; locations used for the treatment, storage or disposal of wastes; liquid storage tanks; processing and storage areas; access roads, rail cars and tracks; transfer areas for substances in bulk; and machinery;

(ix) Locations of storm water outfalls and an approximate outline of the area draining to each outfall, and location of municipal storm sewer systems, if the storm water from the facility discharges to them;

(x) Location and description of all non-storm water discharges;

(xi) Location of any storage piles containing salt used for deicing or other commercial or industrial purposes;

(xii) Locations and sources of runon to the site from adjacent property, where the runon contains significant quantities of pollutants. The permittee shall include an evaluation with the SWPPP of how the quality of the storm water running onto the facility impacts the facility's storm water discharges; and

(xiii) Storage tanks, scrap yards, general refuse areas; short and long term storage of general materials (including, but not limited to: supplies, construction materials, paint equipment, oils, fuels, used and unused solvents, cleaning materials, paint, water treatment chemicals, fertilizer, and pesticides); landfills; construction sites; and stock pile areas (such as coal or limestone piles).

d) Receiving Waters and Wetlands. The name of all surface waters receiving discharges from the site, including intermittent streams, dry sloughs, and arroyos. Provide a description of wetland sites that may receive discharges from the facility.

3. Summary of Potential Pollutant Sources. The plan shall identify each separate area at the facility where industrial materials or activities are exposed to storm water. Industrial materials or activities include, but are not limited to: material handling equipment or activities, industrial machinery, raw materials, industrial production and processes, intermediate products, byproducts, final products, and waste products. Material handling activities include, but are not limited to: the storage, loading and unloading, transportation, disposal, or conveyance of any raw material, intermediate product, final product or waste product. For each separate area identified, the description shall include:

a) Activities in Area. A list of the activities (e.g., material storage, equipment fueling and cleaning, cutting steel beams); and

b) Pollutants. A list of the associated pollutant(s) or pollutant constituents (e.g., crankcase oil, zinc, sulfuric acid, cleaning solvents, etc.) for each activity. The pollutant list shall include all significant materials handled, treated, stored or disposed that have been exposed to storm water in the three years prior to the date this SWPPP was prepared or amended. The list shall include any hazardous substances or oil at the facility.

4. Spills and Leaks. The SWPPP shall clearly identify areas where potential spills and leaks that can contribute pollutants to storm water discharges can occur and their corresponding outfalls. The plan shall include a list of significant spills and leaks of toxic or hazardous pollutants that actually occurred at exposed areas, or that drained to a storm water conveyance during the three-year period prior to the date this SWPPP was prepared or amended. The list shall be updated if significant spills

or leaks occur in exposed areas of the facility during the term of the permit. Significant spills and leaks include releases of oil or hazardous substances in excess of reportable quantities.

5. Sampling Data. The plan shall include a summary of existing storm water discharge sampling data taken at the facility. The summary shall include, at a minimum, any data collected during the previous permit term.

6. Storm Water Controls.

   a) BMPs shall be implemented for all the areas identified in Part I.F.2.b.3 (Summary of Potential Pollutant Sources) to prevent or control pollutants in storm water discharges from the facility. All reasonable steps shall be taken to control or address the quality of discharges from the site that may not originate at the facility. The SWPPP shall describe the type, location and implementation of all BMPs for each area where industrial materials or activities are exposed to storm water. Selection of BMPs shall take into consideration:

      1. That preventing storm water from coming into contact with polluting materials is generally more effective, and less costly, than trying to remove pollutants from storm water;

      2. BMPs generally shall be used in combination with each other for most effective water quality protection;

      3. Assessing the type and quantity of pollutants, including their potential to impact receiving water quality, is critical to designing effective control measures;

      4. That minimizing impervious areas at the facility can reduce runoff and improve groundwater recharge and stream base flows in local streams (however, care shall be taken to avoid ground water contamination);

      5. Flow attenuation by use of open vegetated swales and natural depressions can reduce in-stream impacts of erosive flows;

      6. Conservation or restoration of riparian buffers will help protect streams from storm water runoff and improve water quality; and

      7. Treatment interceptors (e.g., swirl separators and sand filters) may be appropriate in some instances to minimize the discharge of pollutants.

   b) Control Measures. The permittee shall implement the following types of BMPs to prevent and control pollutants in the storm water discharges from the facility, unless it can be demonstrated and documented that such controls are not relevant to the discharges (e.g., there are no storage piles containing salt).

      (i) Good Housekeeping. The permittee shall keep clean all exposed areas of the facility that are potential sources of pollutants to storm water discharges. Typical problem areas include areas around trash containers, storage areas, loading docks, and vehicle fueling and maintenance areas. The plan shall include a schedule for regular pickup and disposal of waste materials, along with routine inspections for leaks and conditions of drums, tanks and containers. The introduction of raw, final or waste materials to exposed areas of the facility shall be minimized to the maximum extent practicable. The generation of dust, along with off-site vehicle tracking of raw, final or waste materials, or sediments, shall be minimized to the maximum extent practicable.

(ii) Eliminating and Minimizing Exposure. To the extent practicable, industrial materials and activities shall be located inside, or protected by a storm-resistant covering to prevent exposure to rain, snow, snowmelt, and runoff. Note: Eliminating exposure at all industrial areas may make the facility eligible for the "Conditional Exclusion for No Exposure" provision of 9VAC25-31-120 E, thereby eliminating the need to have a permit.

(iii) Preventive Maintenance. The permittee shall have a preventive maintenance program that includes regular inspection, testing, maintenance and repairing of all industrial equipment and systems to avoid breakdowns or failures that could result in leaks, spill and other releases. This program is in addition to the specific BMP maintenance required under Part I.F.2.c (Maintenance of BMPs).

(iv) Spill Prevention and Response Procedures. The plan shall describe the procedures that will be followed for preventing and responding to spills and leaks.

(a) Preventive measures such as barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling.

(b) Response procedures shall address notification of appropriate facility personnel, emergency agencies, and regulatory agencies, and procedures for stopping, containing and cleaning up spills. Measures for cleaning up hazardous material spills or leaks shall be consistent with applicable RCRA regulations at 40 CFR Part 264 and 40 CFR Part 265. Employees who may cause, detect or respond to a spill or leak shall be trained in these procedures and have necessary spill response equipment available. If possible, one of these individuals shall be a member of the Pollution Prevention Team.

(c) Contact information for individuals and agencies that shall be notified in the event of a spill shall be included in the SWPPP, and in other locations where it will be readily available.

(v) Routine Facility Inspections. Facility personnel who possess the knowledge and skills to assess conditions and activities that could impact storm water quality at the facility, and who can also evaluate the effectiveness of BMPs shall regularly inspect all areas of the facility where industrial materials or activities are exposed to storm water. These inspections are in addition to, or as part of, the comprehensive site evaluation required under Part I.F.2.d. At least one member of the Pollution Prevention Team shall participate in the routine facility inspections.

The inspection frequency shall be specified in the plan based upon a consideration of the level of industrial activity at the facility, but shall be a minimum of quarterly unless more frequent intervals are specified elsewhere in the permit or written approval is received from the Department for less frequent intervals. At least once each calendar year, the routine facility inspection shall be conducted during a period when a storm water discharge is occurring.

Any deficiencies in the implementation of the SWPPP that are found shall be corrected as soon as practicable, but not later than within 30 days of the inspection, unless permission for a later date is granted in writing by the Director. The results of the inspections shall be documented in the SWPPP, along with the date(s) and description(s) of any corrective actions that were taken in response to any deficiencies or opportunities for improvement that were identified.

(v) Employee Training. The permittee shall implement a storm water employee training program for the facility. The SWPPP shall include a schedule for all types of necessary training, and shall document all training sessions and the employees who received the training. Training shall be provided for all employees who work in areas where industrial materials or activities are exposed to storm water, and for employees who are responsible for implementing activities identified in the SWPPP (e.g., inspectors, maintenance personnel, etc.). The training shall cover the components and goals of the SWPPP, and include such topics as spill response, good housekeeping, material management practices, BMP operation and maintenance, etc. The SWPPP shall include a summary of any training performed.

(vi) Sediment and Erosion Control. The plan shall identify areas at the facility that, due to topography, land disturbance (e.g., construction, landscaping, site grading), or other factors, have a potential for soil erosion. The permittee shall identify and implement structural, vegetative, and/or stabilization BMPs to prevent or control on-site and off-site erosion and sedimentation. Flow velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel if the flows would otherwise create erosive conditions.

(vii) Management of Runoff. The plan shall describe the storm water runoff management practices (i.e., permanent structural BMPs) for the facility. These types of BMPs are typically used to divert, infiltrate, reuse, or otherwise reduce pollutants in storm water discharges from the site. Structural BMPs may require a separate permit under § 404 of the CWA and the Virginia Water Protection Permit Program Regulation (9VAC25-210) before installation begins.

7. Additional Storm Water Pollution Prevention Plan Requirements

In addition to the requirements found in Part I.F.2.b.1 through Part I.F.2.b.6, the SWPPP shall include the following items:

a. Good housekeeping measures.

1. Delivery vehicles. The plan shall describe measures that prevent or minimize contamination of storm water runoff from delivery vehicles arriving on the plant site. At a minimum the permittee shall consider the following:

   a) Develop procedures for the inspection of delivery vehicles arriving on the plant site, and ensure overall integrity of the body or container; and

   b) Develop procedures to deal with leakage/spillage from vehicles or containers.

2. Fuel oil unloading areas. The plan shall describe measures that prevent or minimize contamination of precipitation/surface runoff from fuel oil unloading areas. At a minimum the permittee shall consider using the following measures, or an equivalent:

   a) Use of containment curbs in unloading areas;

   b) During deliveries, having station personnel familiar with spill prevention and response procedures present to ensure that any leaks/spills are immediately contained and cleaned up; and

   c) Use of spill and overflow protection (e.g., drip pans, drip diapers, and/or other containment devices placed beneath fuel oil connectors to contain potential spillage during deliveries or from leaks at the connectors).

3. Chemical loading/unloading areas. The permittee shall describe and implement measures that prevent or minimize the contamination of precipitation/surface runoff from chemical loading/unloading areas. At a minimum the permittee shall consider using the following measures (or their equivalents):

   a) Use of containment curbs at chemical loading/unloading areas to contain spills;

   b) During deliveries, having station personnel familiar with spill prevention and response procedures present to ensure that any leaks/spills are immediately contained and cleaned up; and

   c) Covering chemical loading/unloading areas, and storing chemicals indoors.

4. Miscellaneous loading/unloading areas. The permittee shall describe and implement measures that prevent or minimize the contamination of storm water runoff from loading and unloading areas. The permittee shall consider the following, at a minimum (or their equivalents):

   a) Covering the loading area;

   b) Grading, berming, or curbing around the loading area to divert runon; or

   c) Locating the loading/unloading equipment and vehicles so that leaks are contained in existing containment and flow diversion systems.

5. Liquid storage tanks. The permittee shall describe and implement measures that prevent or minimize contamination of storm water runoff from aboveground liquid storage tanks. At a minimum the permittee shall consider employing the following measures (or their equivalents):

   a) Use of protective guards around tanks;

   b) Use of containment curbs;

   c) Use of spill and overflow protection; and

   d) Use of dry cleanup methods.

6. Large bulk fuel storage tanks. The permittee shall describe and implement measures that prevent or minimize contamination of storm water runoff from large bulk fuel storage tanks. At a minimum the permittee shall consider employing containment berms (or its equivalent). The permittee shall also comply with applicable state and federal laws, including Spill Prevention Control and Countermeasures (SPCC).

7. Spill reduction measures. The permittee shall describe and implement measures to reduce the potential for an oil/chemical spill, or reference the appropriate section of their SPCC plan. The Station shall inspect their above ground storage tanks in accordance with the facility's SPCC plan.

8. Oil bearing equipment in switchyards. The permittee shall describe and implement measures to prevent or minimize contamination of surface runoff from oil bearing equipment in switchyard areas. The permittee shall consider the use of level grades and gravel surfaces to retard flows and limit the spread of spills, and the collection of storm water runoff in perimeter ditches.

9. Residue hauling vehicles. All residue hauling vehicles shall be inspected for proper covering over the load, adequate gate sealing and overall integrity of the container body. Vehicles without load coverings or adequate gate sealing, or with leaking containers or beds shall be repaired as soon as practicable.

10. Areas adjacent to disposal ponds or landfills. The permittee shall describe and implement measures that prevent or minimize contamination of storm water runoff from areas adjacent to disposal ponds or landfills. The permittee shall develop procedures to:

a) Reduce ash residue which may be tracked on to access roads traveled by residue trucks or residue handling vehicles; and

b) Reduce ash residue on exit roads leading into and out of residue handling areas.

11. Landfills, scrapyards, surface impoundments, open dumps, general refuse sites. The plan shall address and include appropriate BMPs for landfills, scrapyards, surface impoundments, open dumps and general refuse sites.

12. Vehicle maintenance activities. For vehicle maintenance activities performed on the plant site, the permittee shall use applicable BMPs.

13. Material storage areas. The permittee shall describe and implement measures that prevent or minimize contamination of storm water runoff from material storage areas (including areas used for temporary storage of miscellaneous products, and construction materials stored in lay-down areas). The permittee shall consider the use of the following measures (or their equivalents): flat yard grades; runoff collection in graded swales or ditches; erosion protection measures at steep outfall sites (e.g., concrete chutes, riprap, stilling basins); covering lay-down areas; storing materials indoors; and covering materials temporarily with polyethylene, polyurethane, polypropylene, or hypalon. Storm water runon may be minimized by constructing an enclosure or building a berm around the area.

c. Maintenance

All BMPs identified in the SWPPP shall be maintained in effective operating condition. Storm water BMPs identified in the SWPPP shall be observed during active operation (i.e., during a storm water runoff event) to ensure that they are functioning correctly. Where discharge locations are inaccessible, nearby downstream locations shall be observed. The observations shall be documented in the SWPPP.

The SWPPP shall include a description of procedures and a regular schedule for preventive maintenance of all BMPs, and shall include a description of the applicable back-up practices that are in place should a runoff event occur while a BMP is off-line. The effectiveness of nonstructural BMPs shall also be maintained by appropriate means (e.g., spill response supplies available and personnel trained, etc.).

If site inspections required by Part I.F.2.b.6.b(v) (Routine Facility Inspections) or Part I.F.2.d (Comprehensive Site Compliance Evaluation) identify BMPs that are not operating effectively, repairs or maintenance shall be performed before the next anticipated storm event. If maintenance prior to the next anticipated storm event is not possible, maintenance shall be scheduled and accomplished as soon as practicable. In the interim, back-up measures shall be employed and documented in the SWPPP until repairs or maintenance is complete.

Documentation shall be kept with the SWPPP of maintenance and repairs of BMPs, including the date(s) of regular maintenance, date(s) of discovery of areas in need of repair or replacement, and for repairs, date(s) that the BMP(s) returned to full function, and the justification for any extended maintenance or repair schedules.

d. Comprehensive Site Compliance Evaluation

The permittee shall conduct comprehensive site compliance evaluations at least once a year. The evaluations shall be done by qualified personnel who possess the knowledge and skills to assess conditions and activities that could impact storm water quality at the facility, and who can also evaluate the effectiveness of BMPs. The personnel conducting the evaluations may be either facility employees or outside constituents hired by the facility.

1. Scope of the Compliance Evaluation. Evaluations shall include all areas where industrial materials or activities are exposed to storm water, as identified in Part I.F.2.b.3. The personnel shall evaluate:

   a) Industrial materials, residue or trash that may have or could come into contact with storm water;

   b) Leaks or spills from industrial equipment, drums, barrels, tanks or other containers that have occurred within the past three years;

   c) Off-site tracking of industrial or waste materials or sediment where vehicles enter or exit the site;

   d) Tracking or blowing of raw, final or waste materials from areas of no exposure to exposed areas;

   e) Evidence of, or the potential for, pollutants entering the drainage system;

   f) Evidence of pollutants discharging to surface waters at all facility outfalls, and the condition of and around the outfall, including flow dissipation measures to prevent scouring;

   g) Review of training performed, inspections completed, maintenance performed, quarterly visual examinations, and effective operation of BMPs; and

   h) Results of both visual and any analytical monitoring done during the past year shall be taken into consideration during the evaluation.

2. Based on the results of the evaluation, the SWPPP shall be modified as necessary (e.g., show additional controls on the map required by Part I.F.2.b.2.c; revise the description of controls required by Part I.F.2.b.6 to include additional or modified BMPs designed to correct problems identified). Revisions to the SWPPP shall be completed within 30 days following the evaluation, unless permission for a later date is granted in writing by the Director. If existing BMPs need to be modified or if additional BMPs are necessary, implementation shall be completed before the next anticipated storm event, if practicable, but not more than 60 days after completion of the comprehensive site evaluation, unless permission for a later date is granted in writing by the Department.

3. Compliance Evaluation Report. A report shall be written summarizing the scope of the evaluation, name(s) of personnel making the evaluation, the date of the evaluation, and all observations relating to the implementation of the SWPPP, including elements stipulated in Part I.F.2.d.1.a through Part I.F.2.d.1.f above. Observations shall include such things as: the location(s) of discharges of pollutants from the site; location(s) of previously unidentified sources of pollutants; location(s) of BMPs that need to be maintained or repaired; location(s) of failed BMPs that need replacement; and location(s) where additional BMPs are needed. The report shall identify any incidents of noncompliance that were observed. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the facility is in compliance with the SWPPP and this permit. The report shall be signed in accordance with Part II. K (Signatory Requirements) of this permit and maintained with the SWPPP.

4. Where compliance evaluation schedules overlap with routine inspections required under Part I.F.2.b.6.b(v), the annual compliance evaluation may be used as one of the routine inspections.

e. Signature and Plan Review

1. Signature/Location. The SWPPP shall be signed in accordance with Part II.K (Signatory Requirements) of this permit, dated, and retained on-site at the facility covered by this permit in accordance with Part II.B.2 (Records) of this permit. All other changes to the SWPPP, and other permit compliance documentation, shall be signed and dated by the person preparing the change or documentation.

2. Availability. The permittee shall make the SWPPP, annual site compliance evaluation report, and other information available to the Department upon request.

3. Required Modifications. The Director may notify the permittee at any time that the SWPPP, BMPs, or other components of the facility's storm water program do not meet one or more of the requirements of this permit. The notification shall identify specific provisions of the permit that are not being met, and may include required modifications to the storm water program, additional monitoring requirements, and special reporting requirements. The permittee shall make any required changes to the SWPPP within 60 days of receipt of such notification, unless permission for a later date is granted in writing by the Director, and shall submit a written certification to the Director that the requested changes have been made.

f. Maintaining an Updated SWPPP

1. The permittee shall review and amend the SWPPP as appropriate whenever:

   a) There is construction or a change in design, operation, or maintenance at the facility that has a significant effect on the discharge, or the potential for the discharge, of pollutants from the facility;

   b) Routine inspections or compliance evaluations determine that there are deficiencies in the BMPs;

   c) Inspections by local, state, or federal officials determine that modifications to the SWPPP are necessary;

   d) There is a spill, leak or other release at the facility; or

   e) There is an unauthorized discharge from the facility.

2. SWPPP modifications shall be made within 30 calendar days after discovery, observation or event requiring a SWPPP modification. Implementation of new or modified BMPs (distinct from regular preventive maintenance of existing BMPs described in Part I.F.2.b.6.b(iii) shall be initiated before the next storm event if possible, but no later than 60 days after discovery, or as otherwise provided or approved by the Director. The amount of time taken to modify a BMP or implement additional BMPs shall be documented in the SWPPP.

3. If the SWPPP modification is based on a release or unauthorized discharge, include a description and date of the release, the circumstances leading to the release, actions taken in response to the release, and measures to prevent the recurrence of such releases. Unauthorized releases and discharges are subject to the reporting requirements of Part II.G (Reports of Unauthorized Discharges) of this permit.

G. Other Requirements and Special Conditions

1. Operation and Maintenance (O&M) Manual Requirement

The permittee shall maintain a current Operations and Maintenance (O&M) Manual for the facility that is in accordance with Virginia Pollutant Discharge Elimination System Regulations, 9VAC25-31.

The O&M Manual and subsequent revisions shall include the manual effective date and meet Part II.K.2 and Part II.K.4 Signatory Requirements of the permit. Any changes in the practices and procedures followed by the permittee shall be documented in the O&M Manual within 90 days of the effective date of the changes. The permittee shall operate the treatment works in accordance with the O&M Manual and shall make the O&M manual available to Department personnel for review during facility inspections. Within 30 days of a request by DEQ, the current O&M Manual shall be submitted to the DEQ-NRO for review and approval.

The O&M manual shall detail the practices and procedures which will be followed to ensure compliance with the requirements of this permit. This manual shall include, but not necessarily be limited to, the following items, as appropriate:

a. Permitted outfall locations and techniques to be employed in the collection, preservation, and analysis of effluent, storm water and sludge samples;
b. Procedures for measuring and recording the duration and volume of industrial wastewater discharged;
c. Discussion of Best Management Practices, if applicable;
d. Procedures for handling, storing, and disposing of all wastes, fluids, and pollutants that will prevent these materials from reaching state waters;
e. Discussion of treatment works design, treatment works operation, routine preventative maintenance of units within the treatment works, critical spare parts inventory and record keeping;
f. A plan for the management and/or disposal of waste solids and residues;
g. List of facility, local and state emergency contacts; and
h. Procedures for reporting and responding to any spills and/or overflows.

2. Water Quality Criteria Monitoring (Outfall 001)

In addition to the compliance monitoring required in Part I.A.1 of the permit, the permittee shall monitor the effluent at Outfall 001 for the substances noted in Appendix B, "Water Quality Criteria Monitoring" according to the indicated analysis number, quantification level, sample type and frequency. Monitoring shall be conducted annually. Using Appendix B as the reporting form, the data shall be submitted in accordance with the schedule in Part I.C.2. Monitoring and analysis shall be conducted in accordance with 40 CFR Part 136 or alternative EPA approved methods. It is the responsibility of the permittee to ensure that proper QA/QC protocols are followed during the sample gathering and analytical procedures. The DEQ will use these data for making specific permit decisions in the future. This permit may be modified or, alternatively, revoked and reissued to incorporate limits for any of the substances listed in Appendix B.

3. Water Quality Criteria Reopener (Outfall 001)

Should effluent monitoring indicate the need for any water quality-based limitations, this permit may be modified or alternatively revoked and reissued to incorporate appropriate limitations.

4. 126 Priority Pollutants (Outfall 105)

In addition to the compliance monitoring required in Part I.A.10 of the permit, the permittee shall monitor the effluent at Internal Outfall 105 for the substances listed in Appendix A to 40 CFR Part 423. Any and all 126 priority pollutants listed in Appendix A to 40 CFR Part 423, contained in the chemicals added for cooling tower maintenance, shall be non-detectable in the blowdown discharge water. In accordance with Part I.A.10 of the permit, sampling for these pollutants (except total chromium and total zinc) shall be conducted quarterly.

This monitoring requirement may be waived if the permittee submits engineering calculations which demonstrate that the regulated pollutants are not detectable in the final discharge by the analytical methods in 40 CFR Part 136.

The permittee shall notify the DEQ-Northern Regional Office of any process change in the cooling tower, which may affect the quality of the associated discharge water.

5. 95% Capacity Reopener (Outfall 111)
A written notice and a plan of action for ensuring continued compliance with the terms of this permit shall be submitted to the DEQ-Northern Regional Office (DEQ-NRO) when the monthly average flow influent to the sewage treatment plant reaches 95 percent of the design capacity authorized in this permit for each month of any three consecutive month period. The written notice shall be submitted within 30 days and the plan of action shall be received at the DEQ-NRO no later than 90 days from the third consecutive month for which the flow reached 95 percent of the design capacity. The plan shall include the necessary steps and a prompt schedule of implementation for controlling any current or reasonably anticipated problem resulting from high influent flows. Failure to submit an adequate plan in a timely manner shall be deemed a violation of this permit.

6. Indirect Dischargers (Outfall 111)
The permittee shall provide adequate notice to the Department of the following:
   a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Section 301 or 306 of Clean Water Act and the State Water Control Law if it were directly discharging those pollutants; and

   b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of this permit.

   c. Adequate notice shall include information on (i) the quality and quantity of effluent introduced into the treatment works, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the treatment works.

7. CTC and CTO Requirement (Outfall 111)
In accordance with *Sewage Collection and Treatment* regulation (9VAC25-790), the permittee shall obtain a Certificate to Construct (CTC) and a Certificate to Operate (CTO) from the Department of Environmental Quality prior to constructing wastewater treatment works and operating the treatment works, respectively. Non-compliance with the CTC or CTO shall be deemed a violation of the permit.

8. Licensed Operator Requirement (Outfall 111)
The permittee shall employ or contract at least one Class IV licensed wastewater works operator for this facility. The license shall be issued in accordance with Title 54.1 of the Code of Virginia and the regulations of the Board for Waterworks and Wastewater Works Operators. The permittee shall notify the Department in writing whenever he is not complying, or has grounds for anticipating he will not comply with this requirement. The notification shall include a statement of reasons and a prompt schedule for achieving compliance.

9. Reliability Class (Outfall 111)

The Sewage Collection and Treatment Regulations at 9VAC25-790 require sewage treatment works to achieve a certain level of reliability in order to protect water quality and public health in the event of component or system failure. Reliability means a measure of the ability of the treatment works to perform its designated function without failure or interruption of service. Overflow criteria, such as period of discharge, are utilized solely for the establishment of reliability classification for design purposes and are not to be construed as authorization for or defense of an unpermitted discharge to state waters. The treatment works design shall provide for satisfactory operation during power failures, flooding, peak loads, equipment failure, and maintenance shut-down (in accordance with the requirements of the appropriate reliability class). Such design features include: (i) additional electrical power sources; (ii) additional flow storage capacity; and (iii) additional treatment unit operations, which provide for alternate operation in accordance with the issued certificate permit requirements.

a. The 0.030 MGD permitted treatment works shall meet Reliability Class II;
b. The installation of any new pump station(s) shall require Reliability Class I; and
c. The permittee shall be responsible for implementing and maintaining adequate safeguards to prevent the discharge of untreated wastewater and/or partially treated wastewater to Lake Anna that has not been treated in accordance with the requirements of this permit.

10. Sludge Reopener (Outfall 111)

The Board may promptly modify or revoke and reissue this permit if any applicable standard for sewage sludge use or disposal promulgated under Section 405(d) of the Clean Water Act is more stringent than any requirements for sludge use or disposal in this permit, or controls a pollutant or practice not limited in this permit.

11. Sludge Use and Disposal (Outfall 111)

The permittee shall conduct all sewage sludge use or disposal activities in accordance with the Sludge Management Plan (SMP) approved with the issuance of this permit. Any proposed changes in the sewage sludge use or disposal practices or procedures followed by the permittee shall be documented and submitted for DEQ-NRO approval 90 days prior to the effective date of the changes. Upon approval, the revised SMP becomes an enforceable part of the permit. The permit may be modified or alternatively revoked and reissued to incorporate limitations or conditions necessitated by substantive changes in sewage sludge use or disposal practices.

12. Materials Handling/Storage

Any and all product, materials, industrial wastes, and/or other wastes resulting from the purchase, sale, mining, extraction, transport, preparation, and/or storage of raw or intermediate materials, final product, by-product or wastes, shall be handled, disposed of, and/or stored in such a manner so as not to permit a discharge of such product, materials, industrial wastes, and/or other wastes to State waters, except as expressly authorized.

13. Notification Levels

The permittee shall notify the Department as soon as they know or have reason to believe:

a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:
   (1) One hundred micrograms per liter;
   (2) Two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter for antimony;
   (3) Five times the maximum concentration value reported for that pollutant in the permit application; or

(4) The level established by the Board.

b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant, which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:
   (1) Five hundred micrograms per liter;
   (2) One milligram per liter for antimony;
   (3) Ten times the maximum concentration value reported for that pollutant in the permit application; or
   (4) The level established by the Board.

14. Polychlorinated Biphenyl
There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid. Compliance with this requirement will be determined using EPA test method 608 (as referenced in 40 CFR Part 136).

15. Liquid Radioactive Discharge
All limitations and monitoring requirements for liquid radioactive waste discharges shall be regulated by the Nuclear Regulatory Commission in accordance with regulations as set forth in 10 CFR Part 20 and 10 CFR Part 50.

16. Use of Chemical Additives
a. The use of chlorine or other biocide other than these identified in the current application, for any purpose other than disinfection at the sewage treatment plant, is prohibited without prior notification to DEQ, Northern Regional Office.

b. At least thirty days prior to using any chemical additives not identified in the permit application, the permittee shall notify DEQ, Northern Regional Office, in writing, of the following:

   (1) chemical additives to be employed and their purposes, and MSDS for each proposed additive;

   (2) schedule of additive usage; and

   (3) wastewater treatment and/or retention to be provided during the use of additives.

c. Should the addition of treatment chemicals significantly alter the characteristics of the effluent, or if their usage becomes persistent or continuous, this permit may be modified or, alternatively, revoked and reissued to include appropriate limitations or conditions

17. Discharge of Wastewater from Particle Separators
The permittee is authorized to discharge wastewaters generated by the operation of particle separators for supply wells 4 and 6 and the operation of the particle separator and sand filter for the supply well serving the North Anna Nuclear Information Center. Wastewater from these treatment units will be land applied in the vicinity of each of the supply wells. As a result of the nature of the wastewater, the permeability of the area soils and the substantial distance of travel to the nearest surface waters, no discharge to or impact upon State waters is anticipated. There are no monitoring or reporting requirements for these discharges. Should the physical characteristics or volume of wastewater change substantially, the permittee shall notify the DEQ, Northern Regional Office in writing in advance of any such change in operation.

18. Debris Collection
Wastes such as solids, sludges, or other pollutants removed from or resulting from treatment or control of wastewaters, or facility operations, including all debris collected on the intake trash racks, shall be disposed of in a manner to prevent any of the removed substances, or runoff from such substances, from entering waters of the State.

19. 316(b) Special Condition

The facility includes a cooling water intake structure governed by §316(b) of the Clean Water Act which requires that the location, design, construction and capacity of the cooling water intake structures reflect the "best technology available (BTA) for minimizing adverse environmental impact". The North Anna – May, 1985 environmental report on impingement and entrainment studies conducted at the facility indicated minimal or no adverse environmental impact. This permit may be reopened to address compliance with Clean Water Act §316(b) through requirements including but not limited to those specified in EPA regulations in 40 CFR Part 125 Subpart J when finalized.

20. PCB Monitoring

The permittee shall conduct PCB monitoring at the facility's intake, in the discharge canal prior to flow entering the WHTF, and at Outfall 001. The permittee shall conduct the sampling and analysis in accordance with the requirements specified below. At a minimum:

a. Monitoring and analysis shall be conducted in accordance with the most current version of EPA Method 1668 or other equivalent methods capable of providing low-detection level, congener specific results. Any equivalent method shall be submitted to DEQ-NRO for review and approval prior to sampling and analysis. It is the responsibility of the permittee to ensure that proper QA/QC protocols are followed during the sample gathering and analytical procedures. The sampling protocol shall be submitted to DEQ-NRO for review and approval prior to the first sample collection.

b. The permittee shall collect two (2) samples within the first three (3) years after the permit reissuance date of May 8, 2014.

c. Each sample shall consist of a minimum 2 liter volume. The sample type, either a grab or automated composite, shall be at the discretion of the permittee.

d. The data shall be submitted to DEQ-NRO by the due date of the DMR for the month following receipt of the results. The permittee shall submit the results electronically. The submittal shall include the unadjusted and appropriately qualified individual PCB congener analytical results. Additionally, laboratory and field QA/QC documentation and results shall be reported. Total PCBs are to be computed as the summation of the reported, quantified congeners.

21. Total Maximum Daily Load (TMDL) Reopener

This permit shall be modified or alternatively revoked and reissued if any approved wasteload allocation procedure, pursuant to Section 303(d) of the Clean Water Act, imposes wasteload allocations, limits or conditions on the facility that are not consistent with the permit requirements.

22. Snow and Ice Control Materials. The permittee shall manage the salt storage facility and salt storage pond in accordance with the following:
    a. Snow and Ice Control Materials
        1. The use of snow and ice control materials shall be in accordance with manufacturer's instructions.
        2. All snow and ice control equipment and spreaders shall be maintained in accordance with manufacturer's instructions.
        3. There shall be no washing of snow and ice control equipment and/or spreaders that will cause a discharge to the salt storage pond.
        4. Storage piles of snow and ice control materials shall remain enclosed to prevent exposure to precipitation.

    b. Salt Storage Pond Maintenance
        1. A minimum of one foot of freeboard shall be maintained in the salt storage pond.
        2. The permittee shall record freeboard levels at least weekly, or more often as necessary, to prevent a discharge to Lake Anna. Records shall include the date and time of the freeboard observation and shall be maintained on site. Records shall be made available to DEQ upon request.

    c. Salt Storage Pond Discharge
        1. In the case of a storm event(s) that could result in an overflow of the salt storage pond, the permittee is authorized to pump water from the salt storage pond to the discharge canal via Outfall 117. This activity is authorized to provide adequate storage in the salt pond to prevent a discharge to Lake Anna.
        2. In the event of a discharge from Outfall 117, the permittee shall record the number of days water was pumped from the salt storage pond and the volume discharged. This information shall be submitted with the DMR for the month in which the discharge took place.

    d. Storm Water Pollution Prevention
        1. The Storm Water Pollution Prevention Plan (SWPPP) shall be updated to include the salt storage facility and salt storage pond.
        2. Monthly inspections of the salt storage facility shall be conducted. Inspections shall include, but are not limited to, salt storage and handling areas and an evaluation of all BMPs (roofs, housekeeping, pond integrity, etc.).
        3. Employees engaged in snow and ice control shall receive annual training on storm water pollution prevention.

23. Storm Water Sampling. The permittee shall conduct Form 2F Part VII monitoring for storm water Outfall 027 and submit the results to DEQ-NRO by May 8, 2017.

CONDITIONS APPLICABLE TO ALL VPDES PERMITS

A. Monitoring

1. Samples and measurements taken as required by this permit shall be representative of the monitored activity.
2. Monitoring shall be conducted according to procedures approved under Title 40 Code of Federal Regulations Part 136 or alternative methods approved by the U.S. Environmental Protection Agency, unless other procedures have been specified in this permit.
3. The permittee shall periodically calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals that will insure accuracy of measurements.
4. Samples taken as required by this permit shall be analyzed in accordance with 1VAC30-45, Certification for Noncommercial Environmental Laboratories, or 1VAC30-46, Accreditation for Commercial Environmental Laboratories.

B. Records

1. Records of monitoring information shall include:
   a. The date, exact place, and time of sampling or measurements;
   b. The individual(s) who performed the sampling or measurements;
   c. The date(s) and time(s) analyses were performed;
   d. The individual(s) who performed the analyses;
   e. The analytical techniques or methods used; and
   f. The results of such analyses.

2. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years, the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period of retention shall be extended automatically during the course of any unresolved litigation regarding the regulated activity or regarding control standards applicable to the permittee, or as requested by the Board.

C. Reporting Monitoring Results

1. The permittee shall submit the results of the monitoring required by this permit not later than the 10th day of the month after monitoring takes place, unless another reporting schedule is specified elsewhere in this permit. Monitoring results shall be submitted to:

   Department of Environmental Quality - Northern Regional Office (DEQ-NRO)
   13901 Crown Court
   Woodbridge, VA 22193

   Monitoring results shall be reported on a Discharge Monitoring Report (DMR) or on forms provided, approved or specified by the Department.

2. If the permittee monitors any pollutant specifically addressed by this permit more frequently than required by this permit using test procedures approved under Title 40 of the Code of Federal Regulations Part 136 or using other test procedures approved by the U.S. Environmental Protection Agency or using

procedures specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or reporting form specified by the Department.

3. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.

D. Duty to Provide Information

The permittee shall furnish to the Department, within a reasonable time, any information which the Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Board may require the permittee to furnish, upon request, such plans, specifications, and other pertinent information as may be necessary to determine the effect of the wastes from this discharge on the quality of state waters, or such other information as may be necessary to accomplish the purposes of the State Water Control Law. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

E. Compliance Schedule Reports

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

F. Unauthorized Discharges

Except in compliance with this permit, or another permit issued by the Board, it shall be unlawful for any person to:

1. Discharge into state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances; or
2. Otherwise alter the physical, chemical or biological properties of such state waters and make them detrimental to the public health, or to animal or aquatic life, or to the use of such waters for domestic or industrial consumption, or for recreation, or for other uses.

G. Reports of Unauthorized Discharges

Any permittee who discharges or causes or allows a discharge of sewage, industrial waste, other wastes or any noxious or deleterious substance into or upon state waters in violation of Part II.F.; or who discharges or causes or allows a discharge that may reasonably be expected to enter state waters in violation of Part II.F., shall notify the Department of the discharge immediately upon discovery of the discharge, but in no case later than 24 hours after said discovery. A written report of the unauthorized discharge shall be submitted to the Department, within five days of discovery of the discharge. The written report shall contain:

1. A description of the nature and location of the discharge;
2. The cause of the discharge;
3. The date on which the discharge occurred;
4. The length of time that the discharge continued;
5. The volume of the discharge;
6. If the discharge is continuing, how long it is expected to continue;
7. If the discharge is continuing, what the expected total volume of the discharge will be; and
8. Any steps planned or taken to reduce, eliminate and prevent a recurrence of the present discharge or any future discharges not authorized by this permit.

Discharges reportable to the Department under the immediate reporting requirements of other regulations are exempted from this requirement.

H. Reports of Unusual or Extraordinary Discharges

If any unusual or extraordinary discharge including a bypass or upset should occur from a treatment works and the discharge enters or could be expected to enter state waters, the permittee shall promptly notify, in no case later than 24 hours, the Department by telephone after the discovery of the discharge. This notification shall provide all available details of the incident, including any adverse affects on aquatic life and the known number of fish killed. The permittee shall reduce the report to writing and shall submit it to the Department within five days of discovery of the discharge in accordance with Part II.I.2. Unusual and extraordinary discharges include but are not limited to any discharge resulting from:

1. Unusual spillage of materials resulting directly or indirectly from processing operations;
2. Breakdown of processing or accessory equipment;
3. Failure or taking out of service some or all of the treatment works; and
4. Flooding or other acts of nature.

I. Reports of Noncompliance

The permittee shall report any noncompliance which may adversely affect state waters or may endanger public health.

1. An oral report shall be provided within 24 hours from the time the permittee becomes aware of the circumstances. The following shall be included as information which shall be reported within 24 hours under this paragraph:
   a. Any unanticipated bypass; and
   b. Any upset which causes a discharge to surface waters.

2. A written report shall be submitted within 5 days and shall contain:
   a. A description of the noncompliance and its cause;
   b. The period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and
   c. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

   The Board may waive the written report on a case-by-case basis for reports of noncompliance under Part II.I. if the oral report has been received within 24 hours and no adverse impact on state waters has been reported.

3. The permittee shall report all instances of noncompliance not reported under Parts II, I.1.or I.2., in writing, at the time the next monitoring reports are submitted. The reports shall contain the information listed in Part II.I.2.

NOTE: The immediate (within 24 hours) reports required in Parts II, G., H. and I. may be made to the Department's Northern Regional Office at (703) 583-3800 (voice) or (703) 583-3821 (fax). For reports outside normal working hours, leave a message and this shall fulfill the immediate reporting requirement. For emergencies, the Virginia Department of Emergency Services maintains a 24-hour telephone service at 1-800-468-8892.

J. Notice of Planned Changes

1. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

   a. The permittee plans alteration or addition to any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:

      1) After promulgation of standards of performance under Section 306 of Clean Water Act which are applicable to such source; or
      2) After proposal of standards of performance in accordance with Section 306 of Clean Water Act which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal;

   b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations nor to notification requirements specified elsewhere in this permit; or

   c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

2. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

K. Signatory Requirements

1. All permit applications shall be signed as follows:

   a. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
      1) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or

      2) The manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

   b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

   c. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a public agency includes:

      1) The chief executive officer of the agency, or
      2) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

2. All reports required by permits, and other information requested by the Board shall be signed by a person described in Part II.K.1., or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in Part II.K.1.;

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and

   c. The written authorization is submitted to the Department.

3. Changes to authorization. If an authorization under Part II.K.2. is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part II.K.2. shall be submitted to the Department prior to or together with any reports, or information to be signed by an authorized representative.

4. Certification. Any person signing a document under Parts II, K.1. or K.2. shall make the following certification:

   "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

L. Duty to Comply

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the State Water Control Law and the Clean Water Act, except that noncompliance with certain provisions of this permit may constitute a violation of the State Water Control Law but not the Clean Water Act. Permit noncompliance is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.
The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if this permit has not yet been modified to incorporate the requirement.

M. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall apply for and obtain a new permit. All permittees with a currently effective permit shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Board. The Board shall not grant permission for applications to be submitted later than the expiration date of the existing permit.

N. Effect of a Permit

This permit does not convey any property rights in either real or personal property or any exclusive privileges, nor does it authorize any injury to private property or invasion of personal rights, or any infringement of federal, state or local law or regulations.

O. State Law

Nothing in this permit shall be construed to preclude the institution of any legal action under, or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any other state law or regulation or under authority preserved by Section 510 of the Clean Water Act. Except as provided in permit conditions on "bypassing" (Part II.U.), and "upset" (Part II.V.) nothing in this permit shall be construed to relieve the permittee from civil and criminal penalties for noncompliance.

P. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Sections 62.1-44.34:14 through 62.1-44.34:23 of the State Water Control Law.

Q. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes effective plant performance, adequate funding, adequate staffing, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

R. Disposal of Solids or Sludges

Solids, sludges or other pollutants removed in the course of treatment or management of pollutants shall be disposed of in a manner so as to prevent any pollutant from such materials from entering state waters.

S. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

T. Need to Halt or Reduce Activity not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

U. Bypass

1. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Parts II, U.2. and U.3.

2. Notice
   a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, prior notice shall be submitted, if possible at least ten days before the date of the bypass.
   b. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Part II.I.

3. Prohibition of bypass.
   a. Bypass is prohibited, and the Board may take enforcement action against a permittee for bypass, unless:
      1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
      2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
      3) The permittee submitted notices as required under Part II.U.2.

   b. The Board may approve an anticipated bypass, after considering its adverse effects, if the Board determines that it will meet the three conditions listed above in Part II.U.3.a.

V. Upset

1. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of Part II.V.2. are met. A determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is not a final administrative action subject to judicial review.

2. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

   a. An upset occurred and that the permittee can identify the cause(s) of the upset;
   b. The permitted facility was at the time being properly operated;
   c. The permittee submitted notice of the upset as required in Part II.I.; and
   d. The permittee complied with any remedial measures required under Part II.S.

3. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

W. **Inspection and Entry**

The permittee shall allow the Director, or an authorized representative, upon presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act and the State Water Control Law, any substances or parameters at any location.

For purposes of this section, the time for inspection shall be deemed reasonable during regular business hours, and whenever the facility is discharging. Nothing contained herein shall make an inspection unreasonable during an emergency.

X. Permit Actions

Permits may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

Y. Transfer of Permits

1. Permits are not transferable to any person except after notice to the Department. Except as provided in Part II.Y.2., a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued, or a minor modification made, to identify the new permittee and incorporate such other requirements as may be necessary under the State Water Control Law and the Clean Water Act.

2. As an alternative to transfers under Part II.Y.1., this permit may be automatically transferred to a new permittee if:
   a. The current permittee notifies the Department at least 30 days in advance of the proposed transfer of the title to the facility or property;
   b. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and
   c. The Board does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in Part II.Y.2.b.

Z. Severability

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

001	Acenaphthene
002	Acrolein
003	Acrylonitrile
004	Benzene
005	Benzidine
006	Carbon Tetrachloride (tetrachloromethane)
007	Chlorobenzene
008	1,2,4-trichlorobenzene
009	Hexachlorobenzene
010	1,2-dichloroethane
011	1,1,1-trichloreothane
012	Hexachloroethane
013	1,1-dichloethane
014	1,1,2-trichloroethane
015	1,1,2,2-tetrachloroethane
016	Chloroethane
018	Bis(2-chloroethyl) ether
019	2-chloroethyl vinyl ether (mixed)
020	2-chloronaphthalene
021	2,4,6-trichlorophenol
022	Parachlorometa cresol
023	Chloroform (trichloromethane)
024	2-chlorophenol
025	1,2-dichlorobenzene
026	1,3-dichlorobenzene
027	1,4-dichlorobenzene
028	3,3-dichlorobenzidine
029	1,1-dichloroethylene
030	1,2-trans-dichloroethylene
031	2,4-dichlorophenol
032	1,2-dichloropropane
033	1,2-dichloropropylene (1,3-dichloropropene)
034	2,4-dimethylphenol
035	2,4-dinitrotoluene
036	2,6-dinitrotoluene
037	1,2-diphenylhydrazine
038	Ethylbenzene
039	Fluoranthene
040	4-chlorophenyl phenyl ether
041	4-bromophenyl phenyl ether
042	Bis(2-chloroisopropyl) ether
043	Bis(2-chloroethoxy) methane
044	Methylene chloride (dichloromethane)
045	Methyl chloride (dichloromethane)
046	Methyl bromide (bromomethane)
047	Bromoform (tribromomethane)
048	Dichlorobromomethane
051	Chlorodibromomethane
052	Hexachlorobutadiene
053	Hexachloromyclopentadiene
054	Isophorone
055	Naphthalene
056	Nitrobenzene
057	2-nitrophenol
058	4-nitrophenol
076	Chrysene
077	Acenaphthylene
078	Anthracene
079	1,12-benzoperylene (benzo(ghi) perylene)
080	Fluorene
081	Phenanthrene
082	1,2,5,6-dibenzanthracene (dibenzo(h) anthracene)
083	Indeno (1,2,3-cd) pyrene (2,3-o-pheynylene pyrene)
084	Pyrene
085	Tetrachloroethylene
086	Toluene
087	Trichloroethylene
088	Vinyl chloride (chloroethylene)
089	Aldrin
090	Dieldrin
091	Chlordane (technical mixture and metabolites)
092	4,4-DDT
093	4,4-DDE (p,p-DDX)
094	4,/4-DDD (p,p-TDE)
095	Alpha-endosulfan
096	Beta-endosulfan
097	Endosulfan sulfate
098	Endrin
099	Endrin aldehyde
100	Heptachlor
101	Heptachlor epoxide (BHC-hexachlorocyclohexane)
102	Alpha-BHC
103	Beta-BHC
104	Gamma-BHC (lindane)
105	Delta-BHC (PCB-polychlorinated biphenyls)
106	PCB-1242 (Arochlor 1242)
107	PCB-1254 (Arochlor 1254)
108	PCB-1221 (Arochlor 1221)
109	PCB-1232 (Arochlor 1232)
110	PCB-1248 (Arochlor 1248)
111	PCB-1260 (Arochlor 1260)
112	PCB-1016 (Arochlor 1016)
113	Toxaphene
114	Antimony
115	Arsenic
116	Asbestos
117	Beryllium
118	Cadmium
119	Chromium
120	Copper
121	Cyanide, Total
122	Lead
123	Mercury
124	Nickel
125	Selenium
126	Silver
127	Thallium
128	Zinc
129	2,3,7,8-tetrachloro-dibenzo-p-dioxin (TCDD)

059	2,4-dinitrophenol
060	4,6-dinitro-o-cresol
061	N-nitrosodimethylamine
062	N-nitrosodiphenylamine
063	N-nitrosodi-n-propylamin
064	Pentachlorophenol
065	Phenol
066	Bis(2-ethylhexyl) phthalate
067	Butyl benzyl phthalate
068	Di-N-Butyl Phthalate
069	Di-n-octyl phthalate
070	Diethyl Phthalate
071	Dimethyl phthalate
072	1,2-benzanthracene (benzo(a) anthracene)
073	Benzo(a)pyrene (3,4-benzo-pyrene)
074	3,4-Benzofluoranthene (benzo(b) flouranthene)
075	11,12-benzofluoranthene (benzo(b) fluoranthene)

APPENDIX B – Outfall 001
DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY CRITERIA MONITORING

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
METALS						
7440-36-0	Antimony, dissolved	(3)	640		G or C	1/YR
7440-38-2	Arsenic, dissolved	(3)	90		G or C	1/YR
7440-43-9	Cadmium, dissolved	(3)	0.39		G or C	1/YR
16065-83-1	Chromium III, dissolved [7]	(3)	25		G or C	1/YR
18540-29-9	Chromium VI, dissolved [7]	(3)	6.4		G or C	1/YR
7440-50-8	Copper, dissolved	(3)	2.8		G or C	1/YR
7439-92-1	Lead, dissolved	(3)	3.4		G or C	1/YR
7439-97-6	Mercury, dissolved	(3)	0.46		G or C	1/YR
7440-02-0	Nickel, dissolved	(3)	6.8		G or C	1/YR
7440-22-4	Silver, dissolved	(3)	0.42		G or C	1/YR
7440-28-0	Thallium, dissolved	(4)	(5)		G or C	1/YR
7440-66-6	Zinc, dissolved	(3)	26		G or C	1/YR
PESTICIDES/PCB'S						
309-00-2	Aldrin	608	0.05		G or C	1/YR
57-74-9	Chlordane	608	0.2		G or C	1/YR
2921-88-2	Chlorpyrifos (synonym = Dursban)	(4)	(5)		G or C	1/YR
72-54-8	DDD	608	0.1		G or C	1/YR
72-55-9	DDE	608	0.1		G or C	1/YR
50-29-3	DDT	608	0.1		G or C	1/YR
8065-48-3	Demeton	(4)	(5)		G or C	1/YR
333-41-5	Diazinon	(4)	(5)		G or C	1/YR
60-57-1	Dieldrin	608	0.1		G or C	1/YR
959-98-8	Alpha-Endosulfan	608	0.1		G or C	1/YR
33213-65-9	Beta-Endosulfan	608	0.1		G or C	1/YR
1031-07-8	Endosulfan Sulfate	608	0.1		G or C	1/YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
72-20-8	Endrin	608	0.1		G or C	1/YR
7421-93-4	Endrin Aldehyde	(4)	(5)		G or C	1/YR
86-50-0	Guthion	(4)	(5)		G or C	1/YR
76-44-8	Heptachlor	608	0.05		G or C	1/YR
1024-57-3	Heptachlor Epoxide	(4)	(5)		G or C	1/YR
319-84-6	Hexachlorocyclohexane Alpha-BHC	608	(5)		G or C	1/YR
319-85-7	Hexachlorocyclohexane Beta-BHC	608	(5)		G or C	1/YR
58-89-9	Hexachlorocyclohexane Gamma-BHC or Lindane	608	(5)		G or C	1/YR
143-50-0	Kepone	(8)	(5)		G or C	1/YR
121-75-5	Malathion	(4)	(5)		G or C	1/YR
72-43-5	Methoxychlor	(4)	(5)		G or C	1/YR
2385-85-5	Mirex	(4)	(5)		G or C	1/YR
56-38-2	Parathion	(4)	(5)		G or C	1/YR
11096-82-5	PCB 1260	608	1.0		G or C	1/YR
11097-69-1	PCB 1254	608	1.0		G or C	1/YR
12672-29-6	PCB 1248	608	1.0		G or C	1/YR
53469-21-9	PCB 1242	608	1.0		G or C	1/YR
11141-16-5	PCB 1232	608	1.0		G or C	1/YR
11104-28-2	PCB 1221	608	1.0		G or C	1/YR
12674-11-2	PCB 1016	608	1.0		G or C	1/YR
1336-36-3	PCB Total	608	7.0		G or C	1/YR
8001-35-2	Toxaphene	608	5.0		G or C	1/YR
BASE NEUTRAL EXTRACTABLES						
83-32-9	Acenaphthene	625	10.0		G or C	1/YR
120-12-7	Anthracene	625	10.0		G or C	1/YR
92-87-5	Benzidine	(4)	(5)		G or C	1/YR
56-55-3	Benzo (a) anthracene	625	10.0		G or C	1/YR
205-99-2	Benzo (b) fluoranthene	625	10.0		G or C	1/YR
207-08-9	Benzo (k) fluoranthene	625	10.0		G or C	1/YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
50-32-8	Benzo (a) pyrene	625	10.0		G or C	1/YR
111-44-4	Bis 2-Chloroethyl Ether	(4)	(5)		G or C	1/YR
108-60-1	Bis 2-Chloroisopropyl Ether	(4)	(5)		G or C	1/YR
117-81-7	Bis-2-ethylhexyl phthalate	625	10.0		G or C	1/YR
85-68-7	Butyl benzyl phthalate	625	10.0		G or C	1/YR
91-58-7	2-Chloronaphthalene	(4)	(5)		G or C	1/YR
218-01-9	Chrysene	625	10.0		G or C	1/YR
53-70-3	Dibenz(a,h)anthracene	625	20.0		G or C	1/YR
84-74-2	Dibutyl phthalate (synonym = Di-n-Butyl Phthalate)	625	10.0		G or C	1/YR
95-50-1	1,2-Dichlorobenzene	624	10.0		G or C	1/YR
541-73-1	1,3-Dichlorobenzene	624	10.0		G or C	1/YR
106-46-7	1,4-Dichlorobenzene	624	10.0		G or C	1/YR
91-94-1	3,3-Dichlorobenzidine	(4)	(5)		G or C	1/YR
84-66-2	Diethyl phthalate	625	10.0		G or C	1/YR
131-11-3	Dimethyl phthalate	(4)	(5)		G or C	1/YR
121-14-2	2,4-Dinitrotoluene	625	10.0		G or C	1/YR
122-66-7	1,2-Diphenylhydrazine	(4)	(5)		G or C	1/YR
206-44-0	Fluoranthene	625	10.0		G or C	1/YR
86-73-7	Fluorene	625	10.0		G or C	1/YR
118-74-1	Hexachlorobenzene	(4)	(5)		G or C	1/YR
87-68-3	Hexachlorobutadiene	(4)	(5)		G or C	1/YR
77-47-4	Hexachlorocyclopentadiene	(4)	(5)		G or C	1/YR
67-72-1	Hexachloroethane	(4)	(5)		G or C	1/YR
193-39-5	Indeno(1,2,3-cd)pyrene	625	20.0		G or C	1/YR
78-59-1	Isophorone	625	10.0		G or C	1/YR
98-95-3	Nitrobenzene	625	10.0		G or C	1/YR
62-75-9	N-Nitrosodimethylamine	(4)	(5)		G or C	1/YR
621-64-7	N-Nitrosodi-n-propylamine	(4)	(5)		G or C	1/YR
86-30-6	N-Nitrosodiphenylamine	(4)	(5)		G or C	1/YR
129-00-0	Pyrene	625	10.0		G or C	1/YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
120-82-1	1,2,4-Trichlorobenzene	625	10.0		G or C	1/YR
	VOLATILES					
107-02-8	Acrolein	(4)	(5)		G	1/YR
107-13-1	Acrylonitrile	(4)	(5)		G	1/YR
71-43-2	Benzene	624	10.0		G	1/YR
75-25-2	Bromoform	624	10.0		G	1/YR
56-23-5	Carbon Tetrachloride	624	10.0		G	1/YR
108-90-7	Chlorobenzene (synonym = monochlorobenzene)	624	50.0		G	1/YR
124-48-1	Chlorodibromomethane	624	10.0		G	1/YR
67-66-3	Chloroform	624	10.0		G	1/YR
75-09-2	Dichloromethane (synonym = methylene chloride)	624	20.0		G	1/YR
75-27-4	Dichlorobromomethane	624	10.0		G	1/YR
107-06-2	1,2-Dichloroethane	624	10.0		G	1/YR
75-35-4	1,1-Dichloroethylene	624	10.0		G	1/YR
156-60-5	1,2-trans-dichloroethylene	(4)	(5)		G	1/YR
78-87-5	1,2-Dichloropropane	(4)	(5)		G	1/YR
542-75-6	1,3-Dichloropropene	(4)	(5)		G	1/YR
100-41-4	Ethylbenzene	624	10.0		G	1/YR
74-83-9	Methyl Bromide	(4)	(5)		G	1/YR
79-34-5	1,1,2,2-Tetrachloroethane	(4)	(5)		G	1/YR
127-18-4	Tetrachloroethylene	624	10.0		G	1/YR
10-88-3	Toluene	624	10.0		G	1/YR
79-00-5	1,1,2-Trichloroethane	(4)	(5)		G	1/YR
79-01-6	Trichloroethylene	624	10.0		G	1/YR
75-01-4	Vinyl Chloride	624	10.0		G	1/YR
	ACID EXTRACTABLES [6]					
95-57-8	2-Chlorophenol	625	10.0		G or C	1/YR
120-83-2	2,4 Dichlorophenol	625	10.0		G or C	1/YR
105-67-9	2,4 Dimethylphenol	625	10.0		G or C	1/YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
51-28-5	2,4-Dinitrophenol	(4)	(5)		G or C	1/YR
534-52-1	2-Methyl-4,6-Dinitrophenol	(4)	(5)		G or C	1/YR
25154-52-3	Nonylphenol	(4)	(5)		G or C	1/YR
87-86-5	Pentachlorophenol	625	50.0		G or C	1/YR
108-95-2	Phenol	625	10.0		G or C	1/YR
88-06-2	2,4,6-Trichlorophenol	625	10.0		G or C	1/YR
MISCELLANEOUS						
57-12-5	Cyanide, Free	(4)	10.0		G	1/YR
7783-06-4	Hydrogen Sulfide	(4)	(5)		G or C	1/YR
471-34-1	Hardness (mg/L as $CaCO_3$)	(4)	(5)		G or C	1/YR

Name of Principal Executive Officer or Authorized Agent/Title

Signature of Principal Officer or Authorized Agent/Date

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. Sec. 1001 and 33 U.S.C. Sec. 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

FOOTNOTES:

(1) Quantification level (QL) is defined as the lowest concentration used for the calibration of a measurement system when the calibration is in accordance with the procedures published for the required method.

The quantification levels indicated for the metals are actually Specific Target Values developed for this permit. The Specific Target Value is the approximate value that may initiate a wasteload allocation analysis. Target values are not wasteload allocations or effluent limitations. The Specific Target Values are subject to change based on additional information such as hardness data, receiving stream flow, and design flows.

Units for the quantification level are micrograms/liter unless otherwise specified.

Quality control and quality assurance information shall be submitted to document that the required quantification level has been attained.

(2) Sample Type

G = Grab = An individual sample collected in less than 15 minutes. Substances specified with "grab" sample type shall only be collected as grabs. The permittee may analyze multiple grabs and report the average results provided that the individual grab results are also reported. For grab metals samples, the individual samples shall be filtered and preserved immediately upon collection.

C = Composite = A 24-hour composite unless otherwise specified. The composite shall be a combination of individual samples, taken proportional to flow, obtained at hourly or smaller time intervals. The individual samples may be of equal volume for flows that do not vary by +/- 10 percent over a 24-hour period.

(3) A specific analytical method is not specified; however a target value for each metal has been established. An appropriate method to meet the target value shall be selected from the following list of EPA methods (or any approved method presented in 40 CFR Part 136). If the test result is less than the method QL, a "<[QL]" shall be reported where the actual analytical test QL is substituted for [QL].

Metal	Analytical Method
Antimony	1638; 1639
Arsenic	1632; 206.5
Chromium[8]	1639
Cadmium	1637; 1638; 1639; 1640
Chromium VI	1639; 218.6 Rev 3.3
Copper	1638; 1640
Lead	1637; 1638; 1640
Mercury	1631; 245.7 Rev 2.0
Nickel	1638; 1639; 1640
Selenium	1638; 1639
Silver	1638
Zinc	1638; 1639

(4) Any approved method presented in 40 CFR Part 136.

(5) The QL is at the discretion of the permittee. For any substances addressed in 40 CFR Part 136, the permittee shall use one of the approved methods in 40 CFR Part 136.

(6) Testing for phenols requires continuous extraction.

(7) Both Chromium III and Chromium VI may be measured by the total chromium analysis. If the result of the total chromium analysis is less than or equal to the lesser of the Chromium III or Chromium VI method QL, the results for both Chromium III and Chromium VI can be reported as "<[QL]", where the actual analytical test QL is substituted for [QL].

(8) The lab may use SW846 Method 8270D provided the lab has an Initial Demonstration of Capability, has passed a PT for Kepone, and meets the acceptance criteria for Kepone as given in Method 8270D